PRECEDENTIAL

UNITED STATES COURT OF APPEALS
THIRD CIRCUIT

Nos. 03-2760/3037/3585

INTERFAITH COMMUNITY ORGANIZATION; LAWRENCE BAKER; MARTHA WEBB HERRING; MARGARET WEBB; REV. WINSTON CLARKE; MARGARITA NAVAS,

v.

HONEYWELL INTERNATIONAL, INC. formerly known as ALLIEDSIGNAL, INC.; RONED REALTY OF JERSEY CITY, INC.; RONED REALTY OF UNION CITY, INC; W.R. GRACE & COMPANY; ECARG, INC; W.R. GRACE, LTD.

W.R. GRACE & COMPANY; ECARG, INC; W.R. GRACE, LTD.,

Defendants/Third-Party Plaintiffs

v.

HELLER-JERSEY CITY, L.L.C.; HOME DEPOT, U.S.A.; SEAMAN FURNITURE COMPANY, INC.

Third Party Defendants

(U.S.D.C. at New Jersey (Newark): 95-CV-02097)
HACKENSACK RIVERKEEPER, INC.; WILLIAM SHEEHAN

v.

HONEYWELL INTERNATIONAL, INC. formerly known as ALLIEDSIGNAL, INC; RONED REALTY OF JERSEY CITY, INC.; RONED REALTY OF UNION CITY, INC.; W.R. GRACE, LTD.

(U.S.D.C. at New Jersey (Newark): 00-CV-01451)
Honeywell International, Inc., Appellant.

On Appeal from the United States District Court
For the District of New Jersey
(D.C. Nos. 95-cv-02097 and 00-CV-1451)
District Judge: Honorable Dennis M. Cavanaugh

Argued December 14, 2004
Before: AMBRO, VAN ANTWERPEN, and STAPLETON, Circuit Judges

(Filed: Feb. 18, 2005)

OPINION OF THE COURT

VAN ANTWERPEN, Circuit Judge

Appellant Honeywell International, Inc. challenges an injunction entered against it after the District Court found it had violated the citizen suit provision of the Resource Conservation and Recovery Act, ("RCRA"), 42 U.S.C. § 6972(a)(1)(B). The District Court had jurisdiction over this claim pursuant to 42 U.S.C. § 6972. We have jurisdiction over Honeywell's consolidated appeals pursuant to 28 U.S.C. § 1291 and will affirm.

I. Background Facts

Starting in 1895, Mutual Chemical Company of America ("Mutual"), later the largest chrome manufacturer in the world, operated a chromate chemical plant in Jersey City, New Jersey. Its process resulted in a waste residue that had a high pH and high concentrations of hexavalent chromium. Mutual piled this waste at a tidal wetlands site along the Hackensack River. The piling of the waste created a land-mass (the "Site") which is the subject of this appeal. The Site consists of some 1,500,000 tons of the waste, 15 to 20 feet deep, on some 34 acres. The Site's high pH prevents the hexavalent chromium from reducing naturally to its less-toxic trivalent form, and enhances its ability to leach freely into surface water and groundwater. The hexavalent chromium is highly soluble, a known carcinogen to humans, and toxic to the environment.[1]

Mutual continued dumping until 1954, when it was succeeded by the Allied Corporation, in turn succeeded by AlliedSignal, Inc., and then Honeywell. The site was never cleaned up.

The State of New Jersey first sought a permanent remedy for the Site in 1982, about the time a "green stream" and "yellowish-green plumes" were observed in surface water on the Site. In 1983, a Honeywell official described it as an "extremely contaminated site, visible to the naked eye" with "yellow water ... draining into the Hackensack River," and concluded " there's something terribly not right with the site." Honeywell did not act, however, until seven years later, about two years after NJDEP had ordered it to do so.

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[1] As the District Court found, the United States Environmental Protection Agency ("EPA") classifies hexavalent chromium in the first quartile of known human carcinogens, more potent than arsenic, benzene, and PCBs. It is toxic not only to humans, but also animals and lower life forms, including benthic organisms. The New Jersey Department of Environmental Protection ("NJDEP") has made similar determinations.

The result was not a permanent remedy but rather an "interim" measure consisting of poured concrete and asphalt over 17 acres of the Site and a plastic liner "cap" over the remaining 17 acres.[2] This was intended to last only five years while a permanent remedy was to be studied and implemented. Honeywell had told NJDEP that the interim measure would not prevent all discharges, even assuming proper maintenance; in any event, as the District Court found, and as we discuss *infra*, the interim measure was constantly in need of repair, having succumbed to, among other things, a phenomenon called "heaving" caused by the waste.[3]

In a 1993 consent order arising from litigation over the Site, AlliedSignal promised $60 million towards a permanent containment solution and NJDEP reserved the right to compel a full cleanup at higher cost. The order also stated that the permanent remedy would be put in place through the NJDEP's usual process, which was to: (I) delineate, or identify, all of the conditions needing remedy; (ii) analyze remedial alternatives and select a remedy; and (iii) take "remedial action." The District Court found, and the record shows, that these steps were not taken or completed.

In 1995, a local community organization, Interfaith Community Organization ("ICO"), and five individual plaintiffs sued Honeywell's predecessor AlliedSignal and the then-owners of the Site under the citizen suit provision of RCRA, § 6972(a)(1)(B), alleging the Site "may present an imminent and substantial endangerment to health or the

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[2] A chain-link fence was also placed around the Site.

[3] As we discuss *infra*, the District Court found and the record shows that chromium waste at the Site is literally "heaving" the ground vertically and horizontally, without warning, causing peaks and valleys of two feet or more in the interim measure "cap," compromising it. The heaving has also caused the structural failure of at least one building.

environment." At the conclusion of a two-week bench trial, the District Court found for plaintiffs and enjoined Honeywell to clean up the Site through excavation of the contamination.[4]

II. Standards of Review

Honeywell challenges plaintiffs' standing, the District Court's imminent and substantial endangerment determination, and the District Court's remedial injunction. We review legal conclusions of standing *de novo*, see *Public Interest Research Group of New Jersey v. Magnesium Elektron, Inc.*, 123 F.3d 111, 119 (3d Cir. 1997), and the underlying factual determinations for clear error. *See Gen. Instrument Corp. v. Nu-Tek Electronics & Mfg., Inc.*, 197 F.3d 83, 86 (3d Cir. 1999). The injunction is reviewed for an abuse of discretion, which requires a showing that the District Court's ruling "rests upon a clearly erroneous finding of fact, an errant conclusion of law, or an improper application of law to fact." *Ameristeel Corp. v. Int'l. Bhd. of Teamsters*, 267 F.3d 264, 267 (3d Cir. 2001); *see also Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 402 (1990).

We have not previously determined the standard of review for RCRA endangerment determinations. Other courts of appeals consider it a question of fact. *See Parker v. Scrap Metal Processors, Inc.* 386 F.3d 993, 1014-15 (11th Cir. 2004) (reviewing jury's RCRA endangerment finding for sufficiency of the evidence); *Cox v. City of Dallas*, 256 F.3d 281, 300-01 (5th Cir. 2001) (concluding district court "did not clearly err" in finding RCRA endangerment); *Dague v. City of Burlington*, 935 F.2d 1343, 1355-56 (2d Cir. 1991) (concluding district court's endangerment

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[4] Honeywell has filed a post-trial motion pursuant to Fed.R.Civ.P. 60(b) for relief from the judgment asserting it has since (a) abated the endangerment by adding additional interim measures; and (b) acquired ownership of all but one acre of the property.

"finding" was not error), *rev'd on other grounds*, 505 U.S. 557 (1992). We will accordingly not disturb the determination here absent clear error. Clear error exists "only if [a finding] is completely devoid of a credible evidentiary basis or bears no rational relationship to the supporting data." *Shire U.S., Inc. v. Barr Labs., Inc.*, 329 F.3d 348, 352 (3d Cir. 2003); *see also United States v. U.S. Gypsum Co.*, 333 U.S. 364, 395 (1948) (reviewing court, on the entire evidence, must be left with the definite conviction that a mistake has occurred). "This standard plainly does not entitle a reviewing court to reverse the finding of the trier of fact simply because it is convinced that it would have decided the case differently." *Anderson v. City of Bessemer*, 470 U.S. 564, 573 (1985). As long as the District Court's account of the evidence is "plausible in light of the record," we may not reverse even if convinced that we "would have weighed the evidence differently." *Id.* at 574. Additionally, where findings of fact are based on live testimony, "due regard shall be given to the opportunity of the trial court to judge the credibility of the witnesses." Fed.R.Civ.P. 52(a).

III. Analysis

A. Standing

Honeywell first challenges plaintiffs' standing. The Constitution, Art. III, § 2, limits the federal judicial power to the resolution of "cases and controversies." *McConnell v. Federal Election Com'n*, 540 U.S. 93, 225 (2003); *Friends of Earth, Inc. v. Laidlaw Envtl. Services (TOC), Inc.*, 528 U.S. 167, 180 (2000). One element of the case-or-controversy requirement is that plaintiffs must establish that they have standing to sue. *McConnell*, 540 U.S. at 225. "Standing is a threshold jurisdictional requirement," *Magnesium Elektron*, 123 F.3d at 117, and we have an obligation to examine our own jurisdiction and that of the district courts. *Id.*; *see also FW/PBS Inc. v. City of Dallas*, 493 U.S. 215, 230-31 (1990).

As such, "[p]laintiffs must have standing at all stages of the litigation ... and they bear the burden of proving it." *Magnesium Elektron*, 123 F.3d at 117.

Three requirements constitute the "irreducible constitutional minimum" of standing. *McConnell*, 540 U.S. at 225 (internal quotation omitted). First, a plaintiff must demonstrate an "injury in fact" that is "concrete," "distinct and palpable," and "actual or imminent." *Id.* (internal quotations omitted); *Laidlaw*, 528 U.S. at 180. It must be "an invasion of a concrete and particularized legally protected interest," *id.* at 227 (quoting *Lujan v. Defenders of Wildlife*,), and may not be either "conjectural or hypothetical," *Laidlaw*, 528 U.S. at 180, or "too remote temporally." *McConnell*, 540 U.S. at 226 (internal quotation omitted). That said, "an identifiable trifle is enough." *United States v. Students Challenging Regulatory Agency Procedures*, 412 U.S. 669, 689 n.14 (1973); *see also Gen. Instrument Corp.*, 197 F.3d at 87 (same); *Pub. Interest Research Group of N.J., Inc. v. Powell Duffryn Terminals, Inc.*, 913 F.2d 64, 71 (3d Cir. 1990) (same).

Second, a plaintiff must demonstrate "a causal connection between the injury and the conduct complained of--the injury has to be 'fairly trace [able] to the challenged action of the defendant, and not ... th[e] result [of] some third party not before the court.'" *McConnell*, 540 U.S. at 225 (internal quotations and citations omitted). Third, a plaintiff must show the "substantial likelihood that the requested relief will remedy the alleged injury in fact." *Id.* at 225-26(internal quotation omitted). It must be "likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." *Laidlaw,* 528 U.S. at 181. Thus, "[a]lthough standing in no way depends on the merits of the plaintiff's contention that particular conduct is illegal, ... it often turns on the nature and source of the claim asserted." *McConnell,* 540 U.S. at 227 (internal quotations omitted).

1. Standing of Individual Plaintiffs

Laidlaw, the Supreme Court's most recent explication of the injury-in-fact requirement in litigation arising under the federal environmental laws, instructs that courts may not "raise the standing hurdle higher than the necessary showing for success on the merits in an action." *Laidlaw*, 528 U.S. at 181. The action in *Laidlaw* arose under the citizen suit provision of the Clean Water Act, which authorizes federal district courts to entertain suits initiated by "'a person ... having an interest which is or may be adversely affected.'" *Id.* at 173; 33 U.S.C. §§ 1365(a), (g).

In *Laidlaw*, one plaintiff averred, *inter alia*, that he would like to "camp" and "picnic ... near" the river at issue, "but would not do so because he was concerned that the water was polluted by [defendant's] discharges." *Laidlaw*, 528 U.S. at 181-82. Another plaintiff averred, *inter alia*, that she had previously "picnicked, walked" and "birdwatched ... along" the river at issue and that she "no longer engaged in these activities because she was concerned about harmful effects from discharged pollutants." *Id.* at 182. The Court held that such statements "adequately documented injury in fact" because they averred "use of the affected area" and because they were "persons 'for whom the aesthetic and recreational values of the area will be lessened' by the challenged activity.'" *Id.* at 183 (quoting *Sierra Club v. Morton*, 405 U.S. 727, 735 (1972)). The Court distinguished its decision in *Lujan v. National Wildlife Federation*, 497 U.S. 871 (1990), in which it had declined to find standing upon "'averments which state only that one of [the organization's] members uses unspecified portions of an immense tract of territory....'" *Id.* at 183 (quoting *Lujan*, 497 U.S. at 889). Further, the Court explained,

> [T]he affiants' conditional statements ... [cannot] be equated with the speculative "'some day' intentions" to visit endangered species half-way

> around the world that we held insufficient to show injury in fact in *Defenders of Wildlife* [, 504 U.S. at 564]....
>
> [W]e see nothing "improbable" about the proposition that a company's continuous and pervasive illegal discharges of pollutants into a river would cause nearby residents to curtail their recreational use of that waterway and would subject them to other economic and aesthetic harms. The proposition is entirely reasonable, the District Court found it was true in this case, and that is enough for injury in fact.

Id. at 184-85. Under *Laidlaw,* the individual Plaintiffs' averments here are sufficient to establish injury-in-fact. One plaintiff averred, *inter alia,* that she has lived all of her life less than a quarter mile from the Site; that "I continue to be concerned about the risk to my health and the health of my son that may continue to be caused by exposure to waste from the adjacent [Site] when we pass by [it] and shop at the [supermarket one block from the Site]"; that the Hackensack River runs less than a quarter mile behind her home; that "[w]hen I was younger, I used to walk by the river on my way to events at Roosevelt Stadium"; that "[w]hen my sons were younger, they used to fish in the river"; that the "river is now dirty and contaminated with chromium and other pollutants"; that "[b]ecause of this pollution, I will no longer walk near or use the river and my sons will no longer fish in the river"; and that "[i]f the river were cleaner, I would walk next to the river and my sons would fish in it." She reaffirmed these statements in deposition testimony.

A second plaintiff averred, *inter alia,* that since 1991 she has also lived less than a quarter mile from the Site; that "I am concerned about the risk to my health and the health of my husband that may be caused by our exposure to chromium-bearing waste from the [Site] both at our home

and when we pass by the Site and shop [a block from the Site]"; that the Hackensack River runs less than a quarter mile behind her home; that "I walk or bike by the river with my children almost every day when the weather is warm"; that "[t]he river is dirty and contaminated with other pollutants, which detracts from my enjoyment of the river"; and that "[i]f the river were cleaner, I would enjoy recreating near the river more." This plaintiff also reaffirmed these statements in her deposition.

Another plaintiff averred, *inter alia,* that he too lives less than a quarter mile from the Site; that "I am concerned about the risk to my health and the health of my family that may be caused by our exposure to chromium-bearing waste from the [Site] both at our home and when we pass by the site and shop at the [supermarket one block from the Site]"; that the Hackensack River flows less than a quarter mile behind his home; that "[t]he river is dirty and I understand it to be contaminated with chromium wastes, among other pollutants;" that "I avoid going near the river, because it is unpleasant to look at and because I am afraid that it may be harmful to my health"; and that "if the river were cleaner, I would enjoy walking near it." This plaintiff also reaffirmed these statements in deposition testimony.

A fourth plaintiff averred, *inter alia,* that for fifty years he has lived about two miles from the Site; that he must use "Jersey City Incinerator Authority gas pumps once or twice a month" located "adjacent to the [Site]"; and that he is "concerned about the risk to my health ... that may continue to be caused by exposure to waste at the [Site] when I go to the Jersey City Incinerator Authority gas pumps." In his deposition, he too reaffirmed his statements.

These sworn statements, found in the individual plaintiffs' affidavits and deposition testimony, were record evidence from which the District Court made numerous findings that are neither clearly erroneous nor challenged by Honeywell on appeal. Honeywell argues instead that the

statements held sufficient in *Laidlaw* averred direct use of an area, *e.g.*, "swim [ming] ... in" and "wad[ing] ... in" a river, *Laidlaw*, 528 U.S. at 181-82, whereas here the averments speak only to recreating "near," "next to," and "along" the river adjacent to Honeywell's Site. Honeywell contends they are thus insufficiently direct to be legally cognizable concerns about whether Honeywell's contamination "may" present an endangerment to human health or to the environment.

The argument is unpersuasive, as such indirect averments may be found in *Laidlaw* itself. *See id.* at 181-82 (summarizing averments of, *inter alia*, camping, picnicking, and walking near a river). More fundamentally, Honeywell's argument neglects *McConnell*'s observation that "standing ... often turns on the nature and source of the claim asserted," 540 U.S. at 227, as well as *Laidlaw*'s instruction that we may not "raise the standing hurdle higher than the necessary showing for success on the merits" under the governing statutory provision. *Id.* at 181. Here, the action arose under a provision of RCRA authorizing suits initiated by "any person .... against any person ... who [possesses a statutorily defined nexus to waste that] *may* present an imminent and substantial endangerment to health *or* the environment." § 6972(a)(1)(B) (emphasis added). The individual Plaintiffs, in establishing injury-in-fact, have shown sufficiently direct and present concerns, neither general nor unreasonable, that constitute a legally cognizable injury as recognized by § 6972(a)(1)(B). *See Laidlaw*, 528 U.S. at 181-84, 120; *see also Friends of the Earth v. Gaston Copper Recycling*, 204 F.3d 149, 160 (4th Cir. 2000) ("The Supreme Court has consistently recognized that threatened rather than actual injury can satisfy Article III standing requirements.... Threats or increased risk thus constitutes cognizable harm.") (collecting cases).

Having found an injury-in-fact, Honeywell's arguments as to traceability and redressability do not detain

us long. Plaintiffs have shown that their legally cognizable injuries under § 6972(a)(1)(B) relate directly to Honeywell's Site, and the "fairly traceable" requirement "does not mean that plaintiffs must show to a scientific certainty that defendant's [actions], and defendant's [actions] alone, caused the precise harm suffered by plaintiffs.... The fairly traceable requirement ... is not equivalent to a requirement of tort causation." *Powell Duffryn*, 913 F.2d at 72. Plaintiffs have also established that injunctive relief will permanently end the endangerments arising from Honeywell's Site as found to exist at trial; at a minimum, the relief will materially reduce their reasonable concerns about those endangerments. *See id.* at 73 (where areas polluted by multiple sources, citizens "need not show that [an area] will be returned to pristine condition"). As the connection between the legally cognizable injury and Honeywell's site was established, *McConnell*, 124 S. Ct. at 707, and as there is more than a substantial likelihood that the relief will remedy that injury, *id.*, the individual plaintiffs have established standing.

2. Associational Standing of ICO

As the Supreme Court confirmed in *Laidlaw:*

> An association has standing to bring suit on behalf of its members when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.

528 U.S. at 181 (citing *Hunt v. Wash. State Apple Adver. Comm'n*, 432 U.S. 333, 343 (1977)). We have found that the individual plaintiffs have standing, and Honeywell does not challenge the District Court's membership findings. The

interests at stake in this litigation are germane to ICO's purpose, which the District Court found to be, *inter alia,* the improvement of the quality of life in Hudson County, New Jersey, where all of the individual plaintiffs live and the Site is located. Finally, neither the claim asserted nor the injunctive relief sought requires the participation of the individual members of ICO. Accordingly, ICO has established associational standing.

B. Imminent and Substantial Endangerment

1. Legal Standard

Honeywell contends it did not violate § 6972(a)(1)(B). As we have already noted, a person may bring suit under this provision

> against any person ... who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.

42 U.S.C. § 6972(a)(1)(B). This provision explicitly allows the consideration of environmental or health effects arising from waste and authorizes suit any time there may be a present threat--an imminent and substantial endangerment--to health or the environment. *Meghrig v. KFC Western, Inc.,* 516 U.S. 479, 485 (1996). To prevail under § 6972(a)(1)(B), a plaintiff must prove:

> (1) that the defendant is a person, including, but not limited to, one who was or is a generator or transporter of solid or hazardous waste or one who was or is an owner or operator of a solid or hazardous waste treatment, storage, or disposal facility; (2) that the defendant has contributed to

> or is contributing to the handling, storage, treatment, transportation, or disposal of solid or hazardous waste; and (3) that the solid or hazardous waste may present an imminent and substantial endangerment to health or the environment.

Parker, 386 F.3d at 1014-15 (quoting *Cox,* 256 F.3d at 292); 42 U.S.C. § 6972(a)(1)(B). Because Honeywell concedes that it is legally responsible for the Site and that chromium is both a solid and a hazardous waste under RCRA, the only remaining issue is whether it "may present an imminent and substantial endangerment to health or the environment." *Id.* The meaning of this statutory language has been summarized as follows:

> The operative word ... [is] "may".... [P]laintiffs need only demonstrate that the waste ... "may present" an imminent and substantial threat.... Similarly, the term "endangerment" means a threatened or potential harm, and does not require proof of actual harm.... The endangerment must also be "imminent" [meaning] threatens to occur immediately.... Because the operative word is "may," however, the plaintiffs must [only] show that there is a potential for an imminent threat of serious harm ... [as] an endangerment is substantial if it is "serious" ... to the environment or health.

Parker, 386 F.3d at 1015 (internal quotations and citations omitted); *Cox,* 256 F.3d at 299-300; *see also United States v. Price,* 688 F.2d 204, 213-14 (3d Cir. 1982) (concluding § 6972(a)(1)(B) contains "expansive language" conferring upon the courts the authority to grant affirmative

equitable relief to the extent necessary to eliminate any risk posed by toxic wastes").

This approach, we believe, is most faithful to the statutory language, especially as to the word "substantial." *See, e.g., United States v. Union Corp.*, 259 F.Supp.2d 356, 399-400 (E.D. Pa. 2003) (observing that RCRA's "substantial" requirement "'does not require quantification of the endangerment (*e.g.*, proof that a certain number of persons will be exposed ... or that a water supply will be contaminated to a specific degree)'") (quoting *United States v. Conservation Chemical Co.*, 619 F.Supp. 162, 194 (W.D. Mo. 1985)). For the reasons we discuss infra, we believe that decisions such as Parker, Cox, Union Corp., and Conservation Chemical define "substantial" in a manner consistent with the statutory language, the legislative history, and the plain meaning of that word. *See, e.g., Cox,* 256 F.3d at 300 (stating that "an endangerment is 'substantial' if it is 'serious'"); *Union Corp.*, 259 F.Supp.2d at 400 (stating that a RCRA "endangerment is substantial if there is some reasonable cause for concern that someone or something may be exposed to a risk of harm ... if remedial action is not taken.") (internal quotation omitted). We do not disagree that, given RCRA's language and purpose, Congress must have intended that "if an error is to be made in applying the endangerment standard, the error must be made in favor of protecting public health, welfare and the environment." *Conservation Chemical,* 619 F.Supp. at 194.

Here, the District Court added four additional requirements to the endangerment showing. These held plaintiffs to a higher than needed showing for success on the merits under § 6972(a)(1)(B). The additional requirements were as follows:

> [A] site "may present an imminent and substantial endangerment" within the meaning of RCRA where: (1) there is a potential population at risk;

> (2) the contaminant at issue is a RCRA "solid" or "hazardous waste"; (3) the contaminant is present at levels above that considered acceptable by the state; and (4) there is a pathway for current and/or future exposure.

263 F.Supp.2d at 838.

At least two of these requirements are irreconcilable with § 6972(a)(1)(B).[5] The first requirement requires a "population," but § 6972(a)(1)(B)'s disjunctive phrasing, "*or* environment," means a living population is not required for success on the merits, as we discuss *infra*. The third requirement, apparently intended by the District Court to give quantitative meaning to the word "substantial" in § 6972(a)(1)(B), is similarly without support. The word "substantial" is not defined by the statute or its legislative history. Turning to a dictionary, we find that "substantial" means "having substance" and "not imaginary"; only as the last of several definitions does the dictionary offer "of considerable size or amount." *Webster's New Universal Unabridged Dictionary* 1817 (2d ed.1983). These definitions do not support one particular type of quantification measurement, such as the District Court's requirement that there be an exceedence of state standards. Honeywell, tacitly following *Cox*, 256 F.3d at 300, equates "substantial" with "serious," which also does not support one particular type of quantification measurement. As noted, the word "substantial" is not defined by the statute or its legislative history, and we have not found any binding authority which stands contrary to this analysis. It is thus difficult to see how § 6972(a)(1)(B) justifies the kind of hurdle created by the District Court's third quantitative requirement--let alone the

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[5] The second requirement is superfluous as it merely repeats the second element of § 6972(a)(1)(B), which requires a "solid or hazardous waste." Although not expressly stated, the fourth requirement is implicit in a finding of liability under § 6972(a)(1)(B).

even *higher* requirements for "substantial" that Honeywell argues for, without citation.

Honeywell's arguments actually provide an additional reason why we will not read state standards into the language of this federal law. Honeywell contends that its conceded discharges into the Hackensack River could not possibly be "substantial" because New Jersey has not yet established a remedial standard for river sediment chromium. We do not believe that Congress intended § 6972(a)(1)(B) to be dependent upon the states in such a manner, and the statutory language provides no support for such dependency.

When Congress enacted RCRA in 1976, it sought to close "the last remaining loophole in environmental law, that of unregulated land disposal of discarded materials and hazardous wastes." H.R.Rep. No. 1491, 94th Cong., 2d Sess. 4, *reprinted in* 1976 U.S.C.C.A.N. 6238, 6241. As we have noted, there is no definition or explanation of the meaning of "substantial," but a discussion of RCRA's amendments observes that § 6972(a)(1)(B) is "'intended to confer upon the courts the authority to eliminate any risks posed by toxic wastes,'" S.Rep. No. 98-284, 98th Cong., 1st Sess. at 59 (1983) (quoting *Price*, 688 F.2d at 213-14), and further that courts should "recogniz[e] that risk may be assessed from suspected, but not completely substantiated, relationships between imperfect data, or from probative preliminary data not yet certifiable as fact." *Id.* (internal quotations and citations omitted). This supports neither the District Court's particular quantitative requirement nor the even higher and more narrow quantitative standards that Honeywell would have us impose.

Decisions of the other courts of appeals are not to the contrary. None require a particular quantitative showing as a *sine qua non* for liability. *See Parker,* 386 F.3d at 1015 (considering evidence of contamination at levels requiring landfill operator to notify state agency but determining substantialness on totality of the evidence); *Cox,* 256 F.3d at

299-301 (finding endangerments at two dumps on totality of the evidence; considering evidence of exceedences as to only one dump); *Dague*, 935 F.2d at 1356 (affirming endangerment finding without considering any quantitative evidence).

The only support we have found for the District Court's requirement is district court authority that is readily distinguishable. In *Price v. U.S. Navy*, 818 F.Supp. 1323 (S.D. Cal. 1992), a district court heard testimony from the defendant's two experts that an endangerment under § 6972(a)(1)(B) could only be found upon satisfaction of the four requirement standard that the District Court used in the present case. The Ninth Circuit affirmed without discussing the experts' four requirements, 39 F.3d 1011 (9th Cir. 1994). Other lower courts have, from time to time, treated the experts' testimony as law without examining the statutory validity of the four requirements. We decline to follow *Price*.

Plaintiffs in this case were required to make a merits showing higher than that actually contemplated by the statute. Even under the higher requirements, the District Court found endangerments as to both human health and the environment as well as *actual* harm to the environment. As we will discuss below, these findings are not clearly erroneous. The District Court's inadvertent legal error with respect to the higher requirements it applied is therefore harmless, as plaintiffs were required to prove, and did prove, more than was needed, not less. *See McQueeney v. Wilmington Trust Co.*, 779 F.2d 916, 917 (3d Cir. 1985) (error is harmless in civil context if there is a high probability that it did not affect the outcome of the case). Proof of contamination in excess of state standards may support a finding of liability, and may alone suffice for liability in some cases, but its required use is without justification in the statute. Accordingly, Honeywell's argument that the District Court erred by not grafting even

higher quantitative requirements onto § 6972(a)(1)(B) is without merit.

2. Evidence of Endangerment

Having analyzed the meaning of the statute, we turn now to the straightforward clear error analysis before us. The District Court first found that the amounts of hexavalent chromium for which Honeywell was responsible far exceeded all applicable NJDEP contamination standards for soil, groundwater, surface water, and river sediments adjacent to the Site. The evidence shows this finding was not clearly erroneous. Hexavalent chromium concentrations in the soil at the Site were as high as 17,900 to 22,100 parts per million (ppm) and averaged 7,800 ppm. As New Jersey's applicable soil standard allows for only 240 ppm, the average level of contamination was over 30 times higher than the state standard, and, at its highest, was about 75 to 90 times higher. Similarly, hexavalent concentrations in surface water at the Site in drainage ditches, or "swales," are as high as 19,000 to 19,900 parts per billion (ppb). As New Jersey allows contamination only on the order of 50 ppb, surface water contamination was over 350 times higher than New Jersey's acceptable limit. Next, concentrations in the groundwater were as high as 23,300 to 24,400 ppb (shallow) and 708,000 ppb to 850,000 ppb (deep). Under New Jersey standards, which are on the order of 100 ppb, this meant concentrations ranged from about 200 to 8,000 times higher than acceptable. Finally, concentrations in the river sediments adjacent to the Site were as high as 33,500 ppm. New Jersey's standard, although apparently not finalized at the time of trial, was tentatively in the range of 80 to 370 ppm. Concentrations in the river sediments were thus roughly 90 to 400 times higher than allowed.[6]

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[6] As we have previously indicated, state standards do not define a party's federal liability under RCRA. However, we find New Jersey's

The District Court then found that there existed present and continuing pathways for exposure such that both human health and the environment were endangered. The evidence showed, among other things, breaches in the 17-acre plastic liner, estimated at the rate of over one million holes per acre; "ponding" of contaminated, high pH water on the Site's surface; percolation of contaminated water to the surface and through the breaches in the liner, as well as through cracks in the asphalt cap; Honeywell's admission that its hexavalent chromium is discharging from the Site's shallow groundwater into the Hackensack River; Honeywell's admission that hexavalent chromium is also seeping to the surface of the Site, mingling with surface water run-off, and entering the river; Honeywell's admission that chromium from its Site has already contaminated river sediments, which would not be possible absent a pathway; and Honeywell's admission that the interim measures it had installed to date were not preventing all discharges of chromium residue from the Site. Additionally, at least one expert testified that the site presented a current risk associated with current exposures existing through these pathways. The District Court credited this testimony, finding it to be credible.

There was also evidence, relevant to several of the District Court's findings, that Honeywell had expressly informed NJDEP at the time of Honeywell's installation of its "interim" measures that they could not prevent all discharges of chromium contamination from the Site, but would rather only "substantially reduce" discharges through their "various routes." The evidence showed that these measures, as built and maintained, were now severely compromised because the 17-acre plastic liner, or "cap," had been used years beyond its intended useful life and was

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standards relevant and useful in determining the existence of an imminent and substantial endangerment.

ripped and leaking due to, among other things, wind damage. Similarly, the asphalt portion of the cap used to cover the remaining 17 acres of the site was buckled and cracked in numerous places due to "heaving" caused by the chromium at the Site.

Additionally as to pathways for human endangerment, the evidence showed ample evidence of human trespass at the Site and in and around the river, including holes and damage to the Site's fence and fencing around the river, discarded food and wrappers, toys, fishing poles and equipment, and graffiti. Our review of the record reveals additional evidence of humans at the Site, including soccer balls and soda bottles. Additionally as to pathways for endangerment to the environment, the District Court found, and the evidence shows, discharges into the groundwater, the river, and river's sediments through multiple routes, as summarized above. Honeywell conceded some of these, notably the discharge of contaminated groundwater into the Site's surface waters that in turn discharge into the river.

On the basis of the above evidence, the District Court's findings were not clearly erroneous. Having reviewed the voluminous record in this case, we find no valid reason to disturb any of the District Court's thorough findings. We also observe that, on appeal, Honeywell conceded that its Site is discharging into the river and that it is possible for those discharges to be harming aquatic organisms. As Honeywell further conceded at argument, there presently exists a problem with the river sediments that needs attention.

In addition to the evidence of contamination of water, river sediments, and the river itself, the record also shows evidence of dogs and birds at and around the Site, as well as fish, invertebrates, benthic organisms, barnacles, mussels, crabs, clams, and crustaceans in the river; and seagulls, owls, pigeons, mice, and Canadian geese around both the Site and

the river. As to other organisms living in the river's sediments, an expert in the fields of ecological risk and sediment contamination conducted standard bioassay tests on sediment dwelling organisms, taking sediment samples directly adjacent to the Site. These tests exhibited mortality rates of 50 to 100 percent for those organisms, which the expert attributed to the Site's contamination. The District Court found this expert knowledgeable and credible.

Finally, the evidence further showed that up to a third of all the chromium waste at the Site remains in the toxic hexavalent state; that the high pH of the Site precludes the normal natural reduction to less-toxic trivalent chromium; that the high pH of the Site in turn assists the hexavalent chromium in freely leaching into water, as it enhances solubility; that NJDEP determined in the late 1980s that the Site posed a risk of human exposure to chromium waste constituting a "substantial risk of imminent damage to public health and safety and imminent and severe damage to the environment"; and that the interim containment measure undertaken by Honeywell in response did not obviate that determination, as the measure was never intended to prevent all discharges, has been used many years past its designed useful life of five years, and has been significantly damaged and compromised by the elements and the phenomenon of "heaving."

Honeywell's criticisms of the District Court's findings and the evidence raise, at most, only minor conflicts that were reasonably reconciled by the District Court. In light of the totality of the evidence, these minor conflicts do not establish any basis for finding clear error as to the findings upon which the District Court's decision solidly rests.

Even assuming *arguendo* the District Court clearly erred with respect to its findings relating to human endangerment, the findings with respect to environmental endangerment are manifestly correct on this record. That is

all that is required under § 6972(a)(1)(B), which imposes liability for endangerments to the environment, including water in and of itself. *See, e.g.*, 42 U.S.C. § 6903(3) (defining "disposal" to include waste discharges "into or on any land or water" where waste is "emitted into the air or discharged into any waters, including groundwaters"); *cf.* N.J. Admin. Code tit. 7 § 26E-1.8 (2002) (identifying groundwater in and of itself as an environmental "receptor" due to its status as an "environmentally sensitive natural resource"). Honeywell does not argue otherwise, concedes direct exposure pathways, and faces evidence of, *inter alia*, concentrations of contamination in groundwater to be on the order of hundreds if not thousands of times greater than the relevant state standard would allow. Indeed, Honeywell concedes the groundwater at the Site is in "danger" because it is so highly contaminated by hexavalent chromium. Chromium from its Site is also discharging into the Hackensack River, which, like groundwater, is part of the environment in and of itself. *See, e.g.*, 42 U.S.C. § 6903(3); *cf.* N.J. Admin. Code tit. 7 §§ 1E-1.8(a), 26E-1.8 (2002) (identifying rivers as an environmental receptor). Although there was some conflicting evidence on the point, the testimony of one of Honeywell's experts may be read to have conceded that Honeywell's Site is discharging chromium into the river on a continuing basis through not one but two separate pathways: over the Site's surface and into the river; and through the Site's fill into the river.

To the extent Honeywell argues that insufficient quantitative assurances existed at trial to guarantee the substantialness of the endangerments, we observe that multiple experts in the areas of human health and/or ecological risk opined as to the cumulative facts establishing the substantialness of the endangerments. These experts were found credible by the District Court over Honeywell's presentation of evidence and cross-examinations to the contrary. Even where there are conflicting interpretations of

data and other scientific information, a trial court's findings will not be overturned so long as the experts whose testimony was credited by the court "provided a reasonable explanation of the scientific data." *Lansford-Coaldale Joint Water Auth. v. Tonolli Corp.*, 4 F.3d 1209, 1216-18 (3d Cir. 1993) (affirming findings regarding contamination threat where evidence reasonably supported expert). That is the case here. The extensive trial record includes the testimony of ten exceptionally qualified experts in the fields of health and environmental risk, ecological and aquatic toxicology, hydrogeology, environmental engineering and geochemistry, environmental remediation, dermatology, and "heaving." Their testimony rested upon legally relevant and permissible facts and assumptions, and had sound factual and scientific basis. We will not disturb findings supported by their testimony.

In sum, on the basis of all of the above evidence, the imminent and substantial endangerment determination was not clearly erroneous.

IV. Propriety of the Injunction

Honeywell argues the District Court erred in enjoining Honeywell to clean up its Site through excavation and removal of the contaminated waste. In addition to the findings of fact we have already discussed, the District Court also found, specific to remedy, that a permanent solution (as opposed to an interim solution) was necessary within the meaning of the statute to eliminate the established endangerments; that NJDEP had already independently come to the same conclusion; that injunctive relief, as opposed to some other form of relief, was necessary to obtain a remedy that was permanent; that Honeywell presented no credible evidence at trial that either a containment "cap" or shallow groundwater treatment, or both, would be an effective permanent remedy; and that excavation and removal of the contamination from the Site was necessary within the

meaning of the statute to ensure a permanent remedy. The evidence shows that experts presented all other conceivable remedial options known to be potentially available, and, on the basis of computer modeling and other factual and scientific grounds, they demonstrated why none were appropriate for the site except excavation. These included capping, encapsulation, reactive barriers, vitrification, solidification and stabilization, bioremediation, chemical reduction, chemical stabilization, chemical extraction, electrokinetics, soil washing, and, finally, "pump and treat" remedies.

The evidence also shows, as discussed *supra,* a Site with unusually high levels of contamination and other unique characteristics, such as the high pH level. A soil and hydrogeology expert, expressly found by the District Court to be credible, and who possessed twenty-five years of experience in the field, stated that "over a large area, I have never seen anything like [this]." The record also demonstrates the unpredictable and structurally damaging phenomenon of "heaving" caused by the chromium. Here, the evidence showed that the Site's heaving has structurally compromised a large building, buckles the 17-acre asphalt portion of the "cap," and defies prediction as to when, where, or to what degree it may move the Site's surface. Honeywell's own consultants called the heaving at the Site "erratic" and "unpredictable," and estimated it will occur for at least another 50 years. Honeywell's experts also conceded there is no viable treatment method capable of stopping heaving, except to remove the chromium waste that causes it. The evidence also showed that the containment remedy of "capping" would not be viable at the Site due to this heaving. Damage to the cap caused by heaving would allow surface water to infiltrate the cap and become contaminated with chromium, creating contaminated surface water and groundwater that would puddle on the surface of the cap and then discharge into the Hackensack River. The evidence

further showed that the holes in the cap and other damage to it caused by heaving would also provide pathways for humans and animals to be exposed not only to the contaminated water, but also the contaminated soil itself. As such, the evidence shows the containment remedy of "capping" would not be an appropriate remedy for the Site. One Honeywell expert conceded this at trial, and another acknowledged that the heaving would cause the damage that leads to that conclusion.

The evidence also shows that at least two experts gave extensive testimony, unrebutted by Honeywell, that, due to the Site's unique characteristics and problems, the District Court's injunction was necessary because only the excavation decreed by the Court could actually permanently abate the endangerments. The Court, which expressly found these witnesses to be credible, heard extensive testimony as to why containment was not appropriate for the Site. The experts articulated reasonable, substantiated concerns about containment, explaining, *inter alia,* that a cap with a containment wall would, upon leaking, cause the Site to "fill up like a bathtub" with contaminated water, which would then overflow into the river. They also explained that heaving would cause such structural stress to a containment liner, no matter the design, that it would eventually fail. As discussed, at least one of Honeywell's own experts, and arguably both, effectively conceded most if not all of these points. Moreover, Honeywell acknowledged at argument that its remedy depends upon continuous institutional monitoring and maintenance for a considerable, perhaps indefinite, period of time, and that, even then, its remedy may not solve the problem of groundwater contamination. As such, none of the District Court's findings in this area were clearly erroneous.

Certainly nothing definitive has been cited to us in support of Honeywell's argument that the critical remedy expert impermissibly "distrusted" containment maintenance

and offered only an unsupportable "personal" opinion about long-run maintenance and monitoring in relation to the permanent remediation of the Site. The record testimony shows that this expert's opinions and testimony were based upon legally relevant and permissible facts and assumptions and had a sound scientific and factual basis. These included the expert's professional experiences and knowledge of other remediation sites involving long term institutional controls such as monitoring and maintenance.

These also included the District Court's independent findings as to Honeywell's dilatory tactics and the inability of NJDEP to deal effectively with those tactics with respect to the Site's clean-up. This finding itself was not clear error, as the evidence shows that, *inter alia,* a complete delineation of the Site's contamination and discharges to the surrounding environment remains incomplete, as a witness from NJDEP stated at trial; and that, similarly, NJDEP still lacked a timetable from Honeywell for the permanent remediation of the Site and had no idea when such a schedule or remedy would be forthcoming. Nor will we disturb the finding of NJDEP's inability to deal effectively with Honeywell and its tactics with respect to the outstanding schedule for a permanent remedy and the implementation of that remedy. The evidence demonstrates a substantial breakdown in the agency process that has resulted in twenty years of permanent clean-up inaction. In conjunction with expert testimony on the question of remedy, this portion of the trial record supports the District Court's findings with respect to long-run maintenance and monitoring of Honeywell's proposed containment system and the necessity of permanently abating the endangerments in this case through excavation.

Honeywell contends the injunction is not sufficiently narrow to be "necessary" within the meaning of RCRA. In so contending, it directs us to post-trial remedial measures that Honeywell has adopted while this appeal was pending. The

sound course with respect to these post-trial activities is to require Honeywell to seek post-trial relief from the District Court pursuant to Fed.R.Civ.P. 60(b). That Court is in the best position to evaluate the question of post-trial relief in light of its findings, which include a history of dilatoriness, failure of prior remedies, and a finding that alternatives other than those ordered by the injunction will not be sufficient to abate the established endangerments. Honeywell's other argument with respect to the injunction's necessity turns on its interpretation of expert witness testimony on the question of long-run maintenance and monitoring of a containment remedy. The District Court expressly rejected Honeywell's position, in findings that were not clear error, and expressly found that the critical expert was credible. That finding, in turn, was based on, among other things, the expert's ability to withstand a thorough cross-examination by Honeywell, which elected to present the bulk of its affirmative case on remedy through this cross-examination instead of calling its own expert. As we discussed *supra,* we will not disturb such testimonial evidence lightly, especially where, as here, it was amply supported by other evidence in the record.

The injunction's language, read in conjunction with the District Court's findings, confirms the necessity for the injunction within the meaning of RCRA. The injunction only orders Honeywell to excavate and remove contaminated soil and then "remedy" those river sediments that have been contaminated with chromium residue from the Site. As to deep groundwater, the injunction only requires Honeywell to study the contamination, and provides that, once that study is complete, the District Court will order additional remedial actions only if "necessary." Given the record in this case, the injunction is reasonable and narrow, as it requires only what is necessary now to abate the established endangerments.

Honeywell argues that the District Court improperly relied on property development interests, unrelated to the

established endangerments, in finding the injunction was necessary. This argument does not detain us long. Although the District Court did discuss the impact of the contamination on possible future development, we do not read its opinion to indicate that this was a determinative factor in granting relief. The District Court found under RCRA that excavation and removal was necessary to remedy the endangerment and rejected a containment remedy because it "is not a viable remedy" given the endangerments and the unique characteristics of the Site. It also found that Honeywell had presented no credible evidence that a cap would be an effective remedy to protect human health and the environment.

Honeywell next argues that the injunction does not serve a public interest. In its brief, Honeywell poses the question as follows: even if cleaning up hexavalent chromium would be "better" for humans living near the site "and for some barnacles and clams in the Hackensack River ... is it worthwhile to move over 1,500,000 tons of fill" and replace it with "over 1,500,000 tons of clean fill?" Honeywell asserts that environmental agencies would answer this question in the negative, and that therefore the District Court erred in reaching a different conclusion.

Without a doubt, the injunction will require the movement of a substantial amount of fill. Nevertheless, Honeywell's framing of the issue misses the point in several respects: the 1,500,000 tons of fill are all contaminated with a hazardous waste; plaintiffs have satisfied the standard for liability; and the evidence they adduced persuaded the District Court that a cleaning up through excavation was necessary, even in light of the monetary and other costs associated with that remedy, including the use of hazardous waste landfill capacities. The record shows the District Court considered the cost-benefit analysis evidence appropriately and made findings consistent with the public interest as reflected in the applicable statutory scheme.

In passing RCRA, Congress established a national policy to "minimize the present and future threat to human health and the environment" from wastes of the type found at Honeywell's Site, 42 U.S.C. § 6902, and Congress has instructed that § 6972 "is intended to allow citizens exactly the same broad substantive and procedural claim for relief which is already available to the United States under section 7003." S.Rep. No. 98-284, 98th Cong., 1st Sess., at 59 (1983). We have previously determined that "due to the nature of the hazards presented by disposal sites, section 7003 is intended to confer upon the courts the authority to grant affirmative equitable relief to eliminate any risks posed by toxic wastes." *Price,* 688 F.2d at 213-14. As such, Honeywell's claim that the District Court "ignore[d] the judgment of Congress, deliberately expressed in legislation" is without merit. *United States v. Oakland Cannabis Buyers' Coop.*, 532 U.S. 483, 497 (2001) (internal quotation omitted).

Honeywell next suggests the public interest requires a sophisticated, step-by-step, "sound" analysis appropriate for the permanent cleanup of a site as large and as contaminated as Honeywell's Site is, and that the District Court lacked the ability to "appreciate the inherent complexity and difficulty" of making "sound" remedial decisions. The District Court was very thorough and its decision is not lacking in any of these respects. It imposed an even higher liability standard than required and properly applied the remedial powers of § 6972(a)(1)(B) through an approach that tracked the very steps Honeywell agreed to in a 1993 consent order with NJDEP.

Honeywell's final argument is that the District Court improperly overrode an ongoing administrative process. As discussed *supra,* the District Court's findings as to Honeywell's dilatory tactics and NJDEP's inability to deal effectively with those tactics are not clear error. Indeed, a fair reading of the record casts strong doubt as to whether

there *is* a process to override in this case. Honeywell next suggests that NJDEP's presence alone precludes a judicial remedy, given Congress' preference for agency-directed cleanups. Not only does the statute not bar the remedy here, but Congress has rejected Honeywell's argument outright. *See* S.Rep. No. 98-284, 98th Cong., 1st Sess. at 57 (1983) "[C]itizens need not exhaust or rely upon other resources or remedies before seeking relief under these amendments. As with Section 7003, these amendments are to be an alternative and supplement to other remedies." Courts should consider the availability of other alternatives, as the District Court did here, but there is no requirement to defer to them, notwithstanding Honeywell's protestations otherwise. *Id.*

More fundamentally, Honeywell argues the remedial injunction usurps agency power. The reconciliation of such power in the injunctive context, however, is not difficult. Honeywell has violated the statute; and, despite Honeywell's argument to the contrary, nothing in the statute precludes the nature of the injunctive relief ordered here. Depending on the particular characteristics of a given RCRA site, as found by a district court on a case-by-case basis, particular types of injunctive relief may not be circumscribed by arguments as to what an agency might have done. "The comprehensiveness of [a court's] equitable jurisdiction is not to be denied or limited in the absence of a clear and valid legislative command." *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 313 (1982) (quoting *Porter v. Warner Holding Co.*, 328 U.S. 395, 398 (1946)). Here, the enforcement language of § 6972(a)(1)(B) is generous: it says that a district court may, *inter alia*, "order ... such other action as may be necessary" to remedy a violation of the statute. Nothing in this language precludes, as part of this enforcement authority, measures such as those required by the District Court here. Certainly we have not been cited to authority requiring otherwise.

Moreover, the injunctive powers of district courts are not as limited as Honeywell would claim. In *Natural Resources Defense Council v. Southwest Marine, Inc.*, 236 F.3d 985 (9th Cir. 2000), a company was violating the terms of its Clean Water Act permit. The question on appeal was whether the District Court in that case could merely order that the permit's terms be observed, or whether it could impose affirmative obligations to remedy the violation. The Court rejected the more restrictive view, stating:

> According to Defendant, a court may do little more than tell the violator to comply with the applicable [state plan] requirements.... We do not agree that a district court's equitable authority is so cramped. The authority to "enforce" ... is more than the authority to declare that [a] requirement exists and repeat that it must be followed. So long as the district court's equitable measures are reasonably calculated to "remedy an established wrong," they are not an abuse of discretion.

Southwest Marine, 236 F.3d at 1000 (quoting *Alaska Ctr. for Env't v Browner,* 20 F.3d 981, 986 (9th Cir. 1994)) (internal citations and quotations omitted). In the case before us, the District Court was presented with a statutory violation, no evidence of a state agency schedule for a permanent clean-up, and expert testimony, found credible by the District Court, that only one approach would in fact remedy the violation permanently. On appeal, Honeywell contends the allowed injunctive relief on such facts may only be, at most, an order "directing Honeywell not to miss NJDEP deadlines." We do not agree. *See, e.g., Southwest Marine,* 236 F.3d at 1000. Given the severity of the contamination at the Site and its other unique characteristics, precisely established in the evidence, the injunction was reasonably calculated, narrowly tailored, and thus necessary to remedy an established wrong. *See Laidlaw*, 528 U.S. at 193 (federal

courts should ensure "the framing of relief no broader than required by the precise facts"). As the District Court did not abuse its discretion, the injunction is affirmed.

VI. Conclusion

We have considered all of the other arguments advanced by the parties and conclude that no further discussion is necessary. Enough time has already been spent in the history of this matter and the time for a clean-up has come. Accordingly, the judgment of the District Court will be affirmed.

AMBRO, Circuit Judge, concurring

Judge Van Antwerpen has written a superlative opinion both in content and tone. I join wholeheartedly but for one issue-how we determine the standard of review-that does not affect the outcome. Indeed, our respective standards of review arrive essentially at the same place though by different paths.

My colleagues conclude that the question of whether waste "may present an imminent and substantial endangerment to health or the environment" under the Resource Conservation and Recovery Act ("RCRA") § 7002(a)(1)(B), 42 U.S.C. § 6972(a)(1)(B), is a question of fact. To me, it is not. Instead, I believe it is a mixed question of fact and law. Whether an issue is of fact, or of fact and law, is important because it generally determines the applicable standard of review. *See A & H Sportswear, Inc. v. Victoria's Secret Stores, Inc.*, 237 F.3d 198, 210 (3d Cir. 2000) (a district court's factual determinations are reviewed for clear error); *In re Cellnet Data Sys. Inc.*, 327 F.3d 242, 244 (3d Cir. 2003) ("We review ... mixed questions of law and fact under a mixed standard, affording a clearly erroneous standard to integral facts, but exercising plenary review of the lower court's interpretation and application of those facts to legal precepts.").

My colleagues' reason for concluding that imminent and substantial endangerment is factual is that three "[o]ther courts of appeals consider it a question of fact." *See Parker v. Scrap Metal Processors, Inc.*, 386 F.3d 993 (11th Cir. 2004); *Cox v. City of Dallas*, 256 F.3d 281 (5th Cir. 2001); *Dague v. City of Burlington*, 935 F.2d 1343 (2d Cir. 1991), *rev'd on other grounds*, 505 U.S. 557 (1992). However, none of these decisions explicitly states that the determination of imminent and substantial endangerment is one of fact.[7]

The Supreme Court has written that "we [do not] yet know of any ... rule or principle that will unerringly distinguish a factual finding from a legal conclusion." *Pullman-Standard v. Swint*, 456 U.S. 273, 288 (1982). However, a practical test I propose for determining whether a question is of fact, of law, or of both fact and law, is as follows. A question of fact can be answered solely by determining the facts of a case (without any need to know the law relevant to the case). A question of law can be answered solely by determining what relevant law means (without any need to determine the facts of a case). A mixed question of fact and law can only be answered by both

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[7] In *Parker*, the Eleventh Circuit reviewed imminent and substantial endangerment for sufficient evidence. 386 F.3d at 1015. The Court did not explain why it used a sufficient evidence standard. In *Cox*, the Fifth Circuit reviewed imminent and substantial endangerment under a clearly erroneous standard. 256 F.3d at 300-01. It did not explain why. In *Dague*, the Second Circuit did not explicitly state which standard of review it applied and offered no reasoning for why it applied that standard. The Court referred to the determination of imminent and substantial endangerment as a "finding." 935 F.2d at 1356. As "finding" implies a question of fact, I agree with the majority that the *Dague* Court thought imminent and substantial endangerment was a question of fact. *Parker*, *Cox*, and arguably *Dague* thus use a deferential standard of review for imminent and substantial endangerment. However, none of these decisions gives any reasoning for why imminent and substantial endangerment should be reviewed deferentially.

determining the facts of a case and determining what the relevant law means.

For example, imagine that a man is appealing his conviction under a law that states "it is a crime to be tall." What kind of question is: "Was the trial court correct to find the man 'tall'?" Can we answer it solely by determining the facts of the case? No, because even if we know the fact that the man is five feet ten inches, we do not know if he is "tall" in the sense that Congress intended the word "tall" to mean. Can we answer it solely by determining what the relevant law means without knowing the man's height? No, because even if we know that the statute defines "tall" as "six feet or taller," we do not know how tall the man is. Thus, we have a mixed question of fact and law. Once we know the facts of the case (that the man is five feet ten inches tall), and what the relevant law means (it is a crime to be six feet tall or taller), we can answer "no" to the question "Was the trial court correct to find the man 'tall'?"

Applying the test to this case, an example of a question of fact (requiring evidence, experts, studies, *etc.*) is the following: "What are the dangers caused by Honeywell's chromium?" An example of a finding of fact is: "Honeywell's chromium caused a 10% chance that between 10,000 and 20,000 mollusks in the sediments will be exposed to chromium between 2006 and 2007, which will eventually lead to infertility in 5% of chromium exposed mollusks."

However, the essential question ("May Honeywell's chromium present an imminent and substantial endangerment to the environment?") is a mixed question of fact and law. The reason this is so is that this question can only be answered by both determining the facts of the case and determining what the relevant law means. That is, not only do we need to know the answer to the following question of fact-"What are the dangers caused by Honeywell's chromium?"-but also, once we get the answer-

"Honeywell's chromium caused a 10% chance that between 10,000 and 20,000 mollusks in the sediments will be exposed to chromium between 2006 and 2007, which will eventually lead to infertility in 5% of chromium exposed mollusks."-we must determine what the relevant law means and whether the fact(s) applied to the law signal a violation. That is, we must ask: What did Congress mean by "may," "imminent," "substantial," "endangerment," "health," and "environment" in RCRA? More specifically, we must at least ask: (1) Is an exposure to a toxin that will occur between one and two years from now "imminent" in the sense that Congress intended "imminent" to mean in RCRA?; and (2) Is a 10% chance that between 10,000 and 20,000 mollusks will incur a 5% increased risk of infertility a "substantial" endangerment in the sense that Congress intended "substantial" to mean in RCRA? Thus, at first blush it appears that, while we should apply a clearly erroneous standard to the facts (the dangers caused by Honeywell's chromium) found by the District Court, we should apply plenary review to the Court's "application of those facts to legal precepts." *Cellnet,* 327 F.3d at 244.

All this theory aside, practical reasons dictate that a mixed standard should not be used in a case such as this. Fact questions predominate the determination of imminent and substantial endangerment. In this case, the District Court had to evaluate the testimony of numerous experts and determine the implications of scientific studies. The First Circuit has adopted a sliding scale approach to such fact-dominated mixed questions, explaining that "[t]he standard of review applicable to mixed questions usually depends upon where they fall along the degree-of-deference continuum: the more fact-dominated the question, the more likely it is that the trier's resolution of it will be accepted unless shown to be clearly erroneous." *In re Extradition of Howard,* 996 F.2d 1320, 1328 (1st Cir. 1993). The Fifth, Sixth, Eighth, and Ninth and Tenth Circuits have also

applied clearly erroneous review to mixed questions when fact questions predominated. *See Love Box Co. v. Comm'r,* 842 F.2d 1213, 1215 (10th Cir. 1988); *Supre v. Ricketts,* 792 F.2d 958, 961 (10th Cir. 1986); *Levi Strauss & Co. v. Blue Bell, Inc.,* 778 F.2d 1352, 1355-56 (9th Cir. 1985); *Connally v. Transcon Lines,* 583 F.2d 199, 202 (5th Cir. 1978); *Nash v. Farmers New World Life Ins. Co.,* 570 F.2d 558, 561 n. 7 (6th Cir. 1978); *Backar v. W. States Prod. Co.,* 547 F.2d 876, 884 (5th Cir. 1977); *Rogers v. Bates,* 431 F.2d 16, 18 (8th Cir. 1970). Two commentators have concluded that "[m]ore and more courts ... attempt to sort out whether a particular mixed law-fact question primarily involves a factual inquiry (in which case [Fed.R.Civ.P.] Rule 52 deference is appropriate even for mixed questions) or primarily the consideration of legal principles (so that de novo review follows)." Steven Alan Childress & Martha S. Davis, *Federal Standards of Review* 2-100 (1999).

Most important, the Supreme Court has stated:

> [W]e have held that deferential review of mixed questions of law and fact is warranted when it appears that the district court is "better positioned" than the appellate court to decide the issue in question or that probing appellate scrutiny will not contribute to the clarity of the legal doctrine. *Miller v. Fenton,* 474 U.S. 104, 114, 106 S.Ct. 445, 45L 88 L.Ed.2d 405 (1985); *see also Cooter & Gell v. Hartmarx Corp.,* 496 U.S. 384, 402, 110 S.Ct. 2447, 2459, 110 L.Ed.2d 359 (1990) ("[T]he district court is better situated than the court of appeals to marshal the pertinent facts and apply [a] fact-dependent legal standard" such as Rule 11); [*Pierce v. Underwood,* 487 U.S. 552, 562 (1988)] ([T]he question whether the Government's litigating position has been 'substantially justified' is ... a multifarious and

> novel question, little susceptible, for the time being at least, of useful generalization.").

Salve Regina Coll. v. Russell, 499 U.S. 225, 233 (1990).

In RCRA cases such as this one, the District Court is better positioned than are we to marshal the pertinent facts and apply a fact-dependent legal standard. The determination of whether waste may present an imminent and substantial endangerment is heavily fact intensive, typically relying on expert testimony and expert studies interpreted at trial by experts. Also, the determination of whether waste may present an imminent and substantial endangerment is a multifarious question, not susceptible to useful generalization. Even though our question is a mixed one, Supreme Court precedent and treatise argument[8] support reviewing it deferentially under a clearly erroneous standard. Thus I arrive at essentially the same deferential standard as my colleagues by a different, and certainly more Proustian, path of analysis.

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[8] As Childress and Davis write:

> If the application [of law to facts] refines the [legal] test or suggests something broadly applicable in future cases, the appellate court legitimately performs the function de novo. However, the actual application of law to facts to see whether a particular set of facts rises up sufficiently to meet the test, except to the extent it defines the test for future courts, is just the fact-finding process, not law-making; it should be reviewed for clear error.

Childress & Davis, *supra,* at 2-102.

INTERFAITH COMMUNITY ORGANIZATION, et al.,	:	UNITED STATES DISTRICT COURT DISTRICT OF NEW JERSEY
Plaintiff(s),	:	
-vs-	:	
	:	Hon. Dennis M. Cavenaugh
HONEYWELL INTERNATIONAL, INC., et al,	:	Civil Action No. 95-2097(DMC)
Defendant(s).	:	**AMENDED OPINION**

This is an action brought by Plaintiffs, Interfaith Community Organization (ICO), Lawrence Baker, Martha Webb Herring, Martha Webb, Reverend Winston Clark and Margarita Navis against Defendants, Honeywell International, Inc. (Honeywell), Roned Realty of Jersey City, Inc. (Roned) and W.R. Grace & Co., ECARG, Inc. and W.R. Grace, Ltd. (the Grace Defendants or Grace), seeking declaratory and injunctive relief mandating the cleanup of environmental contamination at Study Area No. 7 (the Site), located in Jersey City, New Jersey. There are also various cross claims by and between Defendants.

The parties tried this matter before me without the benefit of a jury on January 14, 15, 16, 21, 22, 23, 27, 28, 29, and 30, and February 3, 4, 5, 6, and 11 of 2003. This Court is asked to decide several issues. First, does the Site in question present an imminent and substantial endangerment to health or the environment under 42 U.S.C. 6972(a)(1)(B); if so, what steps must be taken to remediate this danger; and, perhaps most importantly, which party is responsible for the remediation.

I find that the Site in question does present an imminent and substantial endangerment to health or the

environment; the appropriate remediation or cleanup entails the excavation, removal, and treatment of the hazardous waste and then restoration of the Site with clean fill; and the party responsible for the remediation and associated costs of same is Honeywell International, Inc.

These and other issues will be dealt with in greater detail below, as it is now incumbent upon me to make Findings of Fact and Conclusions of Law pursuant to Fed.R.Civ.P.52(a).

FACTUAL FINDINGS REGARDING THE SITE (STUDY AREA 7)

The Site, known by the New Jersey Department of Environmental Protection (NJDEP) as Study Area 7 of the Hudson County Chromium sites, consists of three contiguous properties: Site 115 (the Roosevelt Drive-In Site), Site 120 (the Furniture Depot, formerly Trader Horn) and Site 157 (formerly the Clean Machine Car Wash). The Site is located on Route 440 in Jersey City, Hudson County, New Jersey, adjacent to the Hackensack River (Block 1290.A, Lots 14D, 14H and 14J). The three properties consist of approximately thirty-four acres with Site 115 making up approximately thirty-one of those acres. The area surrounding the Site consists of commercial and industrial facilities and a residential development. Presently, the Roosevelt Drive-in and Clean Machine Car Wash sites are owned by ECARG, Inc., and the Trader Horn Site is owned by Roned Realty of Jersey City, Inc.

The parties have stipulated that the Site is a "facility" as that term is defined in CERCLA § 101(9), 42 U.S.C. § 9601(9) and N.J.A.C. § 7:1E-1.6.

From approximately 1895 to 1954, Mutual Chemical Company of America owned and operated a chromate production facility located across Route 440 (formerly the Morris Canal) from the Site. Until its close in 1954, this

facility extracted chromium from chromium ores to produce chromate chemicals. This process generated chromium bearing waste or chromium ore processing residue which will hereinafter be referred to as COPR. Mutual acquired the property across Route 440 from its Jersey City facility for the purpose of disposing large amounts of COPR. This disposal of COPR by Mutual through a pipeline created a land mass from what was tidal wetlands. During this processing time period, Mutual generated and transported approximately one million tons of chromium contaminated COPR to the Site. The COPR is approximately fifteen to twenty feet deep, covers the entire Site and still remains at the Site today.

Approximately twenty-five percent (25%) to thirty-three per cent (33%) of the chromium in the COPR is in the form of highly toxic hexavalent chromium. As will be discussed in great detail below and as was testified to by numerous medical and scientific experts, hexavalent chromium is a known carcinogen, and depending on one's exposure, will cause a number of health related maladies, as well as environmental problems.

THE PARTIES

Interfaith is a not for profit corporation incorporated under the laws of the State of New Jersey. The remaining individual Plaintiffs, Baker, Herring, Webb, Clarke and Navis, are concerned citizens living near the Site.

Honeywell is incorporated under the laws of the State of Delaware. Honeywell is the corporate successor to Mutual Chemical Company of America and Allied Signal, Inc., Allied Chemical & Dye Corporation, Allied Chemical Corporation, Allied Corporation, and is therefore liable for any and all acts, omissions, debts and liabilities of Mutual and Allied related to or arising out of the chromium contamination at the Site. The Allied Corporation and

Honeywell International, Inc. will be referred to herein as Honeywell.

Defendant Roned Realty of Jersey City, Inc. owns the portion of the Roosevelt Drive-In Site No. 120 and designated as Lot 14D in Tax Block 1290A, Jersey City, Hudson County, New Jersey. In August, 1960, Amy Joy Realty transferred Site 120 to Hestor Realty Corporation. After a series of real estate transfers over the years, Site 120 came to be owned by Roned Realty in November, 1977. Roned is a corporation formed under the laws of the State of New Jersey and is the present owner of the Trader Horn property, alternatively known as Site 120 which comprises approximately three acres of the Study Area 7 Site.

Mutual, a subsidiary of Allied Signal, which ultimately merged with and became Honeywell, owned and operated the chromium chemical production facility across from the Site from 1895 to 1954. In or about 1954, Allied Chemical & Dye Corporation (later Allied Signal) acquired Mutual and sold the Site to Amy Joy Realty Corporation for the construction of a drive-in movie theater. The drive-in was completed in 1955.

In 1965, Amy Joy Realty Corporation subdivided the Site and leased a portion to Goodrich Associates for the construction of a commercial building. Diana Stores Corporation later joined this lease. Diana Stores Corporation merged into Daylin, Inc. in 1969. Daylin in turn was acquired in 1979 by W.R. Grace & Co. and W.R. Grace, Ltd. W.R. Grace, Inc. is a corporation formed under the laws of the State of Connecticut and W.R. Grace, Ltd. is a direct subsidiary of W.R. Grace, Inc. with a registered office in London, England.

In 1981, Daylin acquired two parcels of land constituting the largest portion of Study Area 7 (the Site). At that time, W.R. Grace & Co. and W.R. Grace, Ltd. were the sole stockholders of Daylin. In 1982, Daylin changed its name to the Grace Retail Corporation. In November, 1986

the Channel Acquisition Company (Channel) acquired Grace Retail/Daylin and pursuant to a letter agreement, Grace Retail was to distribute some of its assets, including its portion of the Site, to ECARG, Inc., a New Jersey corporation and a subsidiary of W.R. Grace & Co. formed in 1975. ECARG presently holds formal title to the Roosevelt Drive-In and Clean Machine Car Wash Sites, Lots 14H and 14J, which comprise approximately thirty-one acres at the Site.

I find Honeywell is the successor to the company (Mutual) which actually deposited the contaminated material at the Site, and Grace and Roned are the present owners of properties which comprise the Site.

THE COMPLAINT AND CROSSCLAIMS

Plaintiffs filed their Complaint on May 3, 1995. The Complaint was amended on August 2, 1995. In Count One of the Amended Complaint Plaintiffs allege Defendants violated § 7002(a)(1)(B) of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6972(a)(1)(B), due to the fact that the chromium bearing waste at the Site may present an imminent and substantial endangerment to health or the environment. The remaining counts of Plaintiffs' Amended Complaint have been dismissed.

On or about May 17, 1996, Roned filed an Answer to the Amended Complaint along with various crossclaims. On January 3, 1997, Roned amended its crossclaims.

The Grace Defendants filed their Third Amended Crossclaims on October 4, 2000, seeking relief against Honeywell under RCRA, CERCLA, the New Jersey Spill Compensation and Control Act and Common Law and other declaratory relief. Honeywell has also asserted crossclaims against Roned and Grace seeking relief under RCRA, contribution under CERCLA, the New Jersey Spill Act and the New Jersey Joint Tortfeasors Contribution Law and other declaratory relief.

Shortly before trial, the Court was informed that Roned had settled its claims with Honeywell. As a result, Roned chose not to appear and took no part in the trial. Plaintiffs' claims against Roned however, remain viable.

While the form of Order pertaining to Honeywell's and Roned's settlement remains unsigned, the Court holds that the settlement has occurred and therefore will treat Roned as a settling party as to its Co-Defendant Honeywell only.

Appropriate and timely pre-suit notice of claims under RCRA and the Clean Water Act were served and filed by the parties.

THE TRIAL

The following is a listing of the witnesses who testified at trial, a brief summary of the subject matter of their testimony and a brief description of their backgrounds or qualifications. In addition, I include my impression as to the credibility of each witness and the weight to be afforded their testimony.

Plaintiffs' Witnesses:

Benjamin I. Ross, Ph.D. was offered by Plaintiffs and qualified as an expert in the area of groundwater and soil contamination. Dr. Ross holds a Bachelor of Science Degree in Physics from Harvard University and a Ph.D. in Physics from Massachusetts Institute of Technology. In addition, he has over twenty-five years of consulting experience in hydro-geology, ground water and soil contamination. Dr. Ross was a knowledgeable witness who testified in a coherent and forthright manner. I found him to be credible.

Cheryl R. Montgomery, Ph.D. was qualified as an expert in the areas of human health and ecological risk assessment. Dr. Montgomery holds a Bachelor of Science Degree and an Advanced Bachelor of Science Degree in Chemistry from McMaster University in Canada and a Ph.D.

in Physical Organic Chemistry from the University of Guelph, Ontario, Canada. She is a principal and owner of Montgomery & Associates which provides strategic planning, oversight management, coordination and scientific technical support for projects involving hazardous waste, site risk assessments and pesticide product registration. Most of her work involves risk assessment at hazardous waste sites.

This witness visited the Site and while she did not test or autopsy any animals, she did come to the conclusion that the amount of chromium at the Site greatly exceeded appropriate NJDEP Standards. She felt the ecosystem at the Site was at risk, which included organisms, plants, animals and birds, as well as people. She testified that the COPR or COPR soil could not support life or growth due to the high content of chromium. I found this witness to be very credible and knowledgeable. I therefore gave significant weight to her testimony as forthright and honest.

Mr. William Sheehan was offered as the Riverkeeper for the Hackensack River and the Executive Director of Hackensack Riverkeeper, Inc. Hackensack Riverkeeper, Inc. is a non-profit public interest organization whose mission is to protect, preserve and restore the natural living and recreational resources of the Hackensack River. This gentleman was very knowledgeable and had a great deal of experience with wildlife and the river itself. While I found Mr. Sheehan to be an honest and credible witness, I do not believe his testimony added much to the trial or did much to assist the Court in reaching a determination.

Bruce Bell, Ph.D. was qualified as an expert in the field of environmental engineering. Dr. Bell holds a Bachelor of Science and Masters Degree in Civil Engineering and a Ph.D. in Environmental Engineering from New York University. He is a licensed professional engineer in New York and New Jersey and a Diplomat of the American Academy of Environmental Engineers. He has also taught and published numerous articles in the field.

Dr. Bell's testimony dealt mainly with the on-going source of hexavalent chrome in the sediment of the Hackensack River and its effects.

I found this witness to be knowledgeable and credible and therefore gave his testimony due consideration.

Plaintiff, Reverend Winston Clarke was offered as a fact witness. Rev. Clarke has resided at a condominium in the Society Hill Residential Development which is approximately one-quarter mile south of the Site. Presently, there are approximately 1,200 condominium units in the first phase of the Society Hill Residential Development and an additional 400 residential units are approved and under construction. The Hackensack River is only a few hundred feet from his home and borders on the Society Hill Residential Development where he has lived for ten years. Rev. Clarke was a credible witness.

Witnesses called by the Grace Defendants:

Elizabeth Anderson, Ph.D. was offered by Defendant Grace as an expert in the areas of human health and ecological risk assessments. Dr. Anderson holds a Bachelor of Science Degree in Chemistry from William & Mary College, a Masters Degree in Organic Chemistry from the University of Virginia and a Ph.D. in Organic Chemistry from American University. Dr. Anderson is the founder of the EPA's Carcinogen Assessment Group and oversaw the EPA's internal committee that wrote the first risk assessment and risk management guidelines for the EPA which were adopted in 1976. Dr. Anderson also had overall responsibility for the EPA's first health risk assessment on chromium which was published in or about 1984. Dr. Anderson has served on numerous peer review committees for the federal government and various state and international organizations, including the National Academy of Sciences, the U.S. Department of Agriculture, the Los Alamos National Laboratory and the Committee to Advise

the New Jersey DEP Commissioner. Dr. Anderson testified that there is a clear link between hexavalent chromium in humans and cancer as well as a variety of other medical problems which produce adverse effects on the DNA, create reproduction problems and cause respiratory and lung problems, as well as contact dermatitis. It was this witness's opinion that there can be no viable future use for this Site in its present condition. Any use would expose people to unacceptable health risks.

It is my assessment that Dr. Anderson was forthright and knowledgeable as well as credible and I therefore gave her testimony substantial weight.

Peter M. Chapman, Ph.D. was qualified as an expert in the fields of ecological risk assessments and sediment contamination. Dr. Chapman received a BSC in Marine Biology, a Masters Degree in Biological Oceanography and a Ph.D. in Benthic Ecology from the University of Victoria, British Columbia, Canada. He is employed by EVS Environmental Consultants as a Senior Scientist and has served as an Adjunct Professor at the University of Illinois. Dr. Chapman is presently retained by Environmental Canada (the Canadian equivalent of the EPA) to assist in determining the toxicity and characterization of all substances being used in commerce in Canada.

Dr. Chapman performed tests on samples at the Site and found chromium contamination of the sediment of the River. The tests revealed high toxicity which killed many of the amphipods. All stations tested closest to the Site showed toxicity and high mortality rates. He also felt certain samples taken from the swales located on the property and water coming off the swales were toxic to rainbow trout and other fish.

I found this witness to be knowledgeable and credible and therefore gave substantial weight to his testimony.

Ronald L. Schmiermund, Ph.D. was qualified as an expert in the areas of geo-chemistry and heaving (discussed

in greater detail below). Dr. Schmiermund received his Bachelor of Science and Masters Degrees in Geo-Chemistry from Pennsylvania State University and a Ph.D. in Geo-Chemistry from the Colorado School of Mines. This witness discussed the heaving phenomena and opined that if the COPR remains on the property, heaving will continue to occur indefinitely. The Court found that Dr. Schmiermund was a knowledgeable and believable witness.

Julio Valera, Ph.D. was qualified as an expert in the field of geo-technical engineering and heaving. Dr. Valera received a Bachelor of Science Degree in Civil Engineering and a Masters Degree in Geo-Technical Engineering from the University of Notre Dame and a Ph.D. in Geo-Technical Engineering from the University of California at Berkeley. Dr. Valera is a licensed professional engineer in California and Colorado. He presently works for Valera Consultants performing geo-technical engineering and earthquake engineering consulting. Dr. Valera testified regarding the heaving phenomenon which is the movement and swelling of the ground upward and settling downward. Due to the instability of the ground caused by heaving, this witness is of the opinion that no buildings or structures can safely be built on this Site without remediation.

I was impressed with this witness and gave his testimony great weight.

Donald V. Belsito, M.D. qualified as an expert in the area of dermatology with specialized knowledge in the fields of allergic contact dermatitis and pathophysiology.

Dr. Belsito received a Bachelor of Science Degree in Biology and Chemistry from Georgetown University and a Medical Degree from Cornell Medical College. He also received a Masters Degree in Business Administration from the University of Canada. He completed a residency in Internal Medicine at Case Western Reserve University and a three-year dermatology residency and fellowship in Dermatologic Immunology at New York University.

Dr. Belsito is Board Certified in Internal Medicine, Dermatology and Dermatologic Immunology. He is a professor at the University of Kansas Medical School and is presently on the staff at the University of Kansas Hospital and the Kansas VA Hospital. In addition, Dr. Belsito maintains a private medical practice in dermatology and sees approximately one hundred and fifty patients per week. He has treated approximately fifty patients for skin disorders as a result of exposure to chromium over the past eight years.

After reviewing the Site, it is Dr. Belsito's opinion that the Site is a present danger to residents, workers and trespassers due to the high chromium and pH levels present. As a result, those who came or come in contact with the Site would in all likelihood contract skin problems including dermatitis, chromium ulcers and possibly nasal septum perforations. The severity of the condition would depend upon the exposure.

I found Dr. Belsito to be both knowledgeable and credible and I therefore gave his testimony significant weight.

Andrew O. Davis, Ph.D. was qualified as an expert in the areas of geo-chemistry, hydro-geology and the fate and transport of contaminants in soil, groundwater and surface water. Dr. Davis holds a Bachelor of Science Degree in Aquatic Biology from Liverpool Polytechnic Institute, a Masters Degree in Environmental Science from the University of Virginia and a Ph.D. in Geology from the University of Colorado. He is presently employed by Geomega, an environmental consulting company in Boulder, Colorado as Vice President and Director of Geo-chemistry. For over twenty years he has studied the fate and transport of organic and inorganic compounds, primarily at RCRA and CERCLA sites.

Through testing at the Site, he found high concentrations of hexavalent chromium at the Site exceeding New Jersey DEP standards. I found this witness to be both

credible and believable and therefore gave his testimony great weight.

Grace called Mr. James Wong who is presently the Director of Global Due Diligence for Honeywell. Mr. Wong was offered as a fact witness employed by Honeywell as being most familiar with the Site on behalf of Honeywell. Mr. Wong received a Chemical Engineering Degree from Worchester Polytechnic Institute in 1974 and a Masters Degree in Environmental Engineering from Drexel University in 1981. He began working for Allied in 1977 and over the years received numerous promotions which included the positions of Project Engineer regarding the disposal of hazardous waste, Corporate Supervisor of Hazardous Waste Control which dealt with superfund sites for Allied, and Corporate Manager for Hazardous Waste Control and Manager/Site Remediation for Allied. This witness is most familiar with the health issues and heaving at the Site on behalf of Honeywell.

I found this witness to be less than candid. On occasion he would not answer questions directly and sometimes offered answers to questions that were not necessarily responsive to the question asked. Mr. Wong was definitely a partisan witness on behalf of Honeywell. His testimony was given diminished weight.

The Grace Defendants next called *Ms. Polly Newbold* as a fact witness. Ms. Newbold has been employed by Trillium, Inc., as a Quality Assessment Manager for approximately fifteen years. Trillium, Inc., is an environmental consulting company that specializes in environmental contamination. Ms. Newbold took environmental samples at the Site which were sent along to a laboratory for testing. Basically, Ms. Newbold was called for the purposes of creating a chain of possession between the samples taken and having them sent to the laboratory for testing. The Court was satisfied her testimony was credible.

The next witness called was *Mr. Harry Pierson.* Mr. Pierson holds a Bachelor of Science Degree from Temple University and a Law Degree from New York University. He is a member of the New York Bar and a Licensed Real Estate Broker in New York. In or about 1976, Mr. Pierson became Senior Vice President of Real Estate for W.R. Grace & Co. Retail Group. Since retiring from W.R. Grace in 1985, he has served as a consultant to W.R. Grace & Co. concerning operational issues, including the sale of its retail group in 1986. As a Senior Vice President of the Retail Group, Mr. Pierson was involved in strategic planning and was an ex officio member of the real estate committees of the various operating retail subsidiaries of W.R. Grace & Co.

Mr. Pierson was offered as a fact witness and testified regarding the planning and expansion of Grace properties. It was Mr. Pierson's testimony that he or Grace had no way of knowing the extent of the contamination at the Site since that did not fall within his area of expertise nor was it a problem that he would deal with as Senior Vice President of Real Estate.

Mr. Pierson is an elderly gentleman who I felt was a very credible and believable witness. There were occasions when he had a slight memory failure, but I attributed that more to his age and the passing years than anything else. Recognizing his many years of affiliation with Grace, I found him to be believable.

Mr. Richard Kantor was offered as an expert in the fields of real estate development and real estate financing. Mr. Kantor holds a Bachelor of Science Degree in Engineering from Purdue University. He is President of Miller Construction Company, a developer and general contractor in Jersey City, New Jersey for over thirty years. It was Mr. Kantor's testimony that a prudent builder would neither purchase nor invest in this Site without some form of remediation and that a prudent lender would not want to lend

on a property such as this due to the cleanup uncertainties. Mr. Kantor was a credible witness.

Grace next called *Mr. Phillip Coop* who qualified as an expert on the standard and practice regarding pre-acquisition environmental site assessments. Mr. Coop holds a Bachelor of Arts Degree in Science and History from Harvard and is a Certified Hazardous Materials Manager. He is President of Ensafe, Inc., an environmental consulting firm which performs a full range of environmental consulting and engineering services including environmental site assessment, environmental investigation and environmental remediation and compliance. Mr. Coop has performed hundreds of site assessments throughout the United States and internationally for most types of property, including a great many for the retail department store industry. It is Mr. Coop's testimony that pre-acquisition assessments were not being done in 1981 due to the fact that there was a very low consciousness of environmental liability at that time. Accordingly, it is Mr. Coop's view that neither Daylin nor Grace would have or should have done much in the way of due diligence or site assessment in 1981 due to the lack of standards.

I found Mr. Coop's testimony to be credible.

Max Costa, Ph.D. was qualified as an expert in the area of toxicology of chromium, including the carcinogenic and mutagenic effects of chromium. Dr. Costa received a Bachelor of Science Degree in Biology from Georgetown University and a Ph.D. in Pharmacology and Biochemistry from the University of Arizona. He is a Professor and Chairman of the Department of Environmental Medicine at New York University School of Medicine. He has been a Professor for approximately twenty-five years and associated with New York University since 1986. He has published numerous articles, many of which addressed the health effects of chromium which were peer reviewed. Dr. Costa has been an advisor to the EPA regarding the procedure for

conducting metal risk assessments, and is currently working under several grants from the National Institute of Health to study chromium and nickle toxicology and carcinogenesis.

I found Dr. Costa to be a most believable witness. He explained in great detail how hexavalent chromium enters the cells of the body and causes damage to the body through adverse effects on the DNA protein. He was a credible and qualified witness and I therefore gave his opinion that hexavalent chromium is toxic to the environment and a carcinogen for people great weight.

Kirk Brown, Ph.D. was qualified as an expert in environmental remediation and heaving as it relates to remediation.

Dr. Brown received a Bachelor of Science Degree in Agronomy from Delaware Valley College, a Masters Degree of Science in Agronomy/Physiology from Cornell University and a Ph.D. in Agronomy from the University of Nebraska. Dr. Brown is a Professor Emeritus at Texas A&M University where he has taught for thirty-one years at the graduate and undergraduate levels. His courses include the topics of soil physics and land disposal of waste materials including hazardous waste. In addition to his teaching position, Dr. Brown is employed by the SI Group in College Station, Texas where his projects include site remediation, site investigations and site permitting of hazardous waste sites. He has been involved in the remediation of several hundred contaminated sites, including a site contaminated with COPR in Jersey City.

Dr. Brown testified in great detail as to the various potential methods of remediation and his ultimate opinion that the only appropriate remediation for this Site, after studying numerous possible methods, would be to excavate the COPR, remove it, treat it, and bring in new clean fill.

I found Dr. Brown to be most believable and credible and I therefore afforded his testimony the greatest weight. Not only was he a knowledgeable and believable witness,

but the subject of his testimony was perhaps the most significant in assisting the Court regarding the appropriate remediation at the Site. Dr. Brown was an excellent witness.

The next witness called by Grace was *Mr. Akos L. Nagy.* Mr. Nagy is employed by Grace as the Director of Real Estate since 1995. He is also the President of Glouster New Community Company, a land development company owned by Grace and he is Vice President of ECARG. Mr. Nagy holds a Bachelor of Arts Degree in Mathematics from Fairleigh Dickinson University and a Masters Degree in Business Administration from Rutgers.

Mr. Nagy's responsibilities at Grace fall into three categories: (1) management of W.R. Grace & Co. lease exposure related to approximately two hundred excess leased properties, (2) evaluation and maximization of the value of W.R. Grace & Co.'s excess fee owned properties throughout the world, and (3) assisting W.R. Grace & Co.'s operating units with various real estate issues worldwide, including acquisitions and divestments.

This witness has no involvement with the remediation aspects of the Site in question, but was merely trying to determine a way to make the Site usable, valuable property.

It was Mr. Nagy's testimony that there were few if any brokers or realtors who actually represented an appropriate buyer for the property because ECARG insisted on an indemnity regarding the property and no one would agree to same due to the environmental problems that existed. I found Mr. Nagy to be a credible witness.

Mr. Hugh McGuire was qualified as a real estate appraisal expert. Mr. McGuire is a Licensed Real Estate Broker in the State of New Jersey and a Licensed General Certified Appraiser in the State of New Jersey and holds a Certified Tax Assessors Certificate from New Jersey. He is the former President of the Hudson County Assessors Association and the current Chairperson of the New Jersey

Chapter of the Council of Real Estate. I found Mr. McGuire to be knowledgeable regarding the values of properties and the uses of properties in Hudson County and especially Jersey City. Mr. McGuire testified as to the fair market value of the Site today, as well as the fair market value in 1981 when the property was sold from Daylin to Grace. The Court was impressed with Mr. McGuire's testimony and therefore gave it significant weight.

The remaining witnesses were called by Defendant Honeywell.

Mr. James Wong was recalled as a fact witness. My comments and views regarding the credibility of this witness remain unchanged from that which I stated previously. Accordingly, I do not afford Mr. Wong's testimony great weight.

Mr. Peter Deming was qualified as an expert in the field of soil mechanics and foundation design. Mr. Deming holds a Bachelor of Science Degree in Civil Engineering and a Masters Degree in Civil Engineering specializing in geo-technical work from the University of Texas. He also holds a Professional Engineering License in the State of New York.

Mr. Deming offered testimony in support of his view that large commercial structures could be built at the Site without excavating the Site. He acknowledged that the type of foundation that would be needed to support such a structure is somewhat experimental and that neither high-rise residential structures (beyond five floors) nor other multiple residential structures would be feasible.

I found Mr. Deming's testimony to be credible and I found Mr. Deming to be a knowledgeable witness in his field. I believe his testimony supported the theory that due to the heaving phenomenon of the COPR, construction on the Site is limited to large commercial structures rather than residential.

The next witness called was Mr. Frank Faranca. Mr. Faranca has worked for the NJDEP as a Case Manager for the Site since 1988. He is a Geologist and a Technical Coordinator responsible for managing hundreds of contaminated sites, including Area No. 7. Mr. Faranca is responsible for carrying out the provisions of the Administrative Consent Order executed by Honeywell and the NJDEP in June of 1993, which covers, among other things, the remediation of the Site.

I found Mr. Faranca to be a very believable witness. This witness testified at great length about the amount of time and effort that has been spent in attempting to resolve the problems at the Site and the lack of cooperation by Honeywell. In response to questions posed during cross examination, this witness clearly testified that there has been much foot-dragging and non-cooperation by Honeywell and that the Site is not much closer to final remediation now than it was when the problems were first brought to Honeywell's attention twenty years ago. I found Mr. Faranca to be a very credible witness.

Mr. Peter Blanchard was offered as an expert in the field of property redevelopment and Brownfield redevelopment. Mr. Blanchard is a real estate broker and principal of the Garribaldi Group, well respected commercial real estate brokers and developers. It is Mr. Blanchard's view that under the present zoning scheme and due to his site evaluation, the highest and best use for the property in question would be retail commercial rather than residential.

Mr. Blanchard was a knowledgeable and credible witness and his testimony was given appropriate weight.

Mr. Fred C. Hart was offered as an environmental due diligence expert.

Mr. Hart obtained a Bachelor of Science Degree in Civil Engineering from Cornell University, a Masters Degree in Civil Engineering from Stanford University and a Masters Degree in Business Administration from the University of

Connecticut. He is a Professional Engineer licensed in the State of New York. Mr. Hart testified that in his opinion, Daylin knew or should have known at the time it purchased the property that there existed environmental problems with the Site that would require remediation. During direct examination, the witness was shown various documents which he believed Daylin and Grace should have been aware of. These documents support his view that the purchaser would be aware of the environmental problems.

I was not impressed with this witness since I believe the evidence does not necessarily support his view that the documents he relied upon were ever seen by, or brought to the attention of representatives of Daylin or Grace. Accordingly, I afforded this witness's testimony little weight.

Mr. Anthony J. Wells was qualified as an expert real estate appraiser.

I found this expert to be well qualified, knowledgeable and believable. He was offered to rebut the testimony of Mr. McGuire who I also found credible. Accordingly, I am faced with two credible witnesses with differences of opinion. It should be pointed out further that Mr. Wells did conduct a commercial analysis of the property and Mr. McGuire did not.

Mr. Richard Ninesteel was offered as a fact witness. He received a Bachelor of Science Degree in Environmental Engineering from Pennsylvania State University and he is a Licensed Professional Engineer in Pennsylvania and Ohio. Mr. Ninesteel became the Project Manager for the remedial investigation of the Honeywell chromium sites in Hudson County, New Jersey in late 1996. Mr. Ninesteel discussed the various wells that were drilled on the Site and the taking of samples from these wells. While the Court finds Mr. Ninesteel to be a credible witness, he did not really offer much at trial.

Honeywell next offered Eric Rifkin, Ph.D. as an expert in the fields of human health and ecological risk assessment. Dr. Rifkin holds a Bachelor of Arts Degree in Biological Sciences from Rutgers University and a Master of Science and Ph.D. in Zoology from the University of Hawaii. He is presently President of Rifkin & Associates, an environmental consulting firm focusing on human health and ecological risk assessment. Rifkin & Associates have been serving as a consultant to Honeywell for approximately eleven years during which time Honeywell has been the source of 40% or more of Rifkin's annual income. Furthermore, Honeywell has been the primary client of Dr. Rifkin and Rifkin Associates for the last seven years. The majority of Dr. Rifkin's income has been the result of his relationship with Honeywell. As part of his work with Honeywell, Dr. Rifkin has advocated Honeywell's position to the NJDEP, including the preparation of comment letters and commenting on drafts of comment letters and also advised Honeywell on policy positions relating to risk assessments. Dr. Rifkin has represented Honeywell in meetings with the NJDEP regarding the chromium contamination at the Site.

The Court is troubled by Dr. Rifkin's testimony in that he alone seems to be at odds with most or all of the other experts who have found that the Site is contaminated to such a degree that it poses a risk to health and the environment. Dr. Rifkin attempts to downplay or minimize the risks and while he acknowledges that some remediation is necessary, he believes there is no significant risk at the present time.

I reject Dr. Rifkin's testimony and I find that he has little or no credibility. It is evident that Dr. Rifkin owes his livelihood to his ongoing relationship with Honeywell and I therefore believe his testimony is unfairly biased in favor of Honeywell.

The final witness offered was Gary R. Walter, Ph.D. who qualified as an expert in the area of fate and transport of

ground water contamination. Dr. Walter holds a Bachelor of Science Degree from the University of Kansas and a Masters Degree in Geology from the University of Missouri at Columbia. He also holds a Ph.D. in Hydro-Geology from the University of Arizona. He is a Licensed Geologist in Arizona, California, Wyoming and Washington with an expertise in groundwater resources. He is a principal of the Southwest Institute. Basically, this witness testified regarding technical formulas he used to determine water flow and concentrations of hexavalent chromium from the Site. He also discussed the viability of a permeable reactive barrier wall as a form of remediation. While I felt Dr. Walter is a knowledgeable and credible witness, I do not believe his testimony assisted the Court when compared to testimony of others, more specifically Dr. Brown.

No further witnesses were called.

FINDINGS OF FACT

As stated in the introduction, I conducted a non-jury trial during January and February of this year (2003). As a result of the trial, the numerous documents entered into evidence and the many witnesses presented, I make the following Findings of Fact and Conclusions of Law.

There are a number of facts that are not in dispute and I therefore will not deal with them any more than is necessary. There is no question but that Mutual, formerly one of the largest chromium producing companies in the United States and perhaps the world, deposited vast amounts of COPR with significant levels of hexavalent chromium at the Site during the first half of the twentieth century. There is also ample evidence that Mutual had knowledge of the health and environmental risks associated with hexavalent chromium as early as the 1920's. During the 20's, 30's and 40's, various articles, memos and studies were circulated among and between the officers and managers of Mutual. These documents, which included records now maintained

by Honeywell, make it clear that Mutual was aware of the adverse health effects posed by hexavalent chromium.

A significant issue to be decided is which party or parties is or are responsible for the Site remediation and the significant costs that will be incurred. Plaintiffs take the position that each of the Defendants is liable and therefore each should be responsible to some degree. It is Honeywell's position that while they acknowledge that they are liable, as successor to Mutual, Honeywell believes Grace or its predecessor should also be liable for remediation since Grace knew or should have known of the significant contamination problems at the Site when it was purchased, and by their actions thereafter as owners.

Grace denies knowledge of the contamination prior to purchasing the Site; claims to be an innocent purchaser who learned of the contamination subsequent to the purchase and claims to have fully cooperated with NJDEP since being notified of the contamination at the Site. It is their position that while they did indeed cooperate with the authorities and clean up certain abandoned drums and other debris placed at the Site by parties unknown, those cleanup efforts had nothing to do with the chromium contamination. Grace argues that the only responsible party is Honeywell.

HONEYWELL IS LIABLE UNDER RCRA

Under RCRA, liability can be established by meeting the requirements of § 7002(a)(1)(b). Liability requires a showing that the Defendant (1) has contributed to or is contributing to (2) the past or present handling, storage, treatment, transportation, or disposal of (3) any solid or hazardous waste that (4) may present an imminent and substantial endangerment to health or the environment.

Honeywell admits that its corporate predecessor, Mutual, transported and deposited hundreds of thousands of tons of chromium waste at the Site. See Final Pretrial Order, Stip. 45-77. This Court has found that Honeywell admits

that it is the corporate successor to Mutual and that it is liable for any and all acts, omissions, debts and liabilities of Mutual relating to or arising out of the chromium contamination at the Site. I am satisfied that the chromium contamination of both the soil and groundwater exceeds the State standards and I reject Honeywell's arguments contrary thereto.

The Defendants admit that the chromium waste at the Site is both a "solid waste" and a "hazardous waste" under RCRA. See Honeywell's Second Amended Crossclaims, Paragraph no. 69, Pl.Ex. 1176,[1] Paragraph 4. Based on these facts and admissions, the Court finds that the chromium at the Site is a solid and a hazardous waste under RCRA.

The Court recognizes that in order to show that a solid or hazardous waste may present an imminent and substantial endangerment, it must be demonstrated that (1) there is a potential population at risk; (2) the contaminant is present at levels above that considered acceptable by the State; and (3) there is a pathway for current and/or future exposure. NJDEP has determined that (NJDEP December 1988 Directive, Pl.Ex. 409, p. 4 and Attach. 1):

> [T]he uncontrolled discharges of hazardous substances from the chromate chemical production waste at the Sites listed in Attachment One are within an area of high population density in the State of New Jersey and that the risk of human exposure to chromate chemical production waste at the Sites listed in Attachment One is ongoing. Chromium compounds contained in the chromate chemical production waste are toxic to humans and include demonstrated human carcinogens. These conditions create a substantial risk of

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[1] "Pl.Ex." refers to Plaintiffs' Trial Exhibits in evidence.

imminent damage to public health and safety and imminent and severe damage to the environment. [emphasis added]

Attachment 1 lists the Site. The Court gives substantial weight to the finding of NJDEP that the chromium contamination at this Site presents an imminent and substantial endangerment.

The Court finds that chromium contamination is present at the Site in several media at levels far in excess of the standards NJDEP set for the Site.

On April 28, 1983, NJDEP notified Honeywell that the Site was contaminated with chromium in excess of levels deemed acceptable by the State. The Court gives substantial weight to the finding of NJDEP that chromium is present at levels that exceed those deemed acceptable by the State and finds that chromium contamination of soil at the Site greatly exceeds all of New Jersey's Soil Clean-Up Criteria which NJDEP has determined apply at the Site.

New Jersey law provides that residential use soil clean-up standards are applicable unless the property owner consents to a deed restriction on the property, in which event the non-residential clean-up standard is applicable. The Grace property owners have informed Honeywell and NJDEP that they do not consent to a deed restriction on the property. The Roned property owners also initially refused to consent to a deed restriction. However, in a settlement reached with Honeywell on December 16, 2002, the Roned property owners changed their original position and now agree to a deed restriction on the portion of the property they own.

New Jersey's residential use soil clean-up standard for hexavalent chromium based on risk of cancer from inhalation is 270 ppm. This standard was set so as to ensure that the risk of cancer is no greater than 1 in 1 million as required by N.J.S.A. 58:10B-12(d).

New Jersey's residential use soil clean-up standard for hexavalent chromium based on health risk from ingestion is 240 ppm.

New Jersey's non-residential use soil clean-up standard for hexavalent chromium based on risk of cancer from inhalation is 20 ppm. This standard was set so as to ensure that the risk of cancer is no greater than 1 in 1 million as required by N.J.S.A. 58:10B-12(d).

New Jersey's non-residential use soil clean-up standard for hexavalent chromium based on human health risk from ingestion is 6,100 ppm.

Honeywell admits that NJDEP has informed it that 240 ppm hexavalent chromium is the applicable clean-up standard for the soil at the Site.

This Court finds that soil contamination at the Site far exceeds all applicable soil clean-up standards: New Jersey's residential standard based on the risk of cancer from inhalation of 270 ppm; the residential standard for ingestion of 240 ppm; the non-residential standard based on the risk of cancer from inhalation of 20 ppm; and the non-residential standard for ingestion of 6,100 ppm. In addition, evidence was produced and I so find chromium contamination of groundwater, onsite surface water, and sediments near the Site in the Hackensack River all exceed the State Standards and therefore present an imminent and substantial endangerment to health and the environment. Accordingly, based upon the foregoing, I find that Honeywell is liable under RCRA. (See Conclusions of Law, *infra*).

CHROMIUM TOXICITY

I find that the waste contamination at the Site presents an imminent and substantial endangerment to human health and the environment such that the remedy must be excavation, removal and treatment and I find that Honeywell is the responsible party and must bear the costs for remediation. I will now deal with these issues, other

claims by and between the parties and the remedies to be imposed in greater detail.

There is no question but that Mutual generated and deposited approximately one million tons of COPR at the Site as of December of 1954 when Mutual ceased operations at its facilities. The COPR contains hexavalent chromium and other chromium compounds which are hazardous substances as defined by RCRA. When deposited at the Site, the COPR contained between 3% and 7% total chromium. Approximately 25% to 33% of the chromium in the COPR is in the form of highly toxic hexavalent chromium. The COPR is also highly alkaline having a pH of as high as 12. The high pH of the COPR causes the chromium to remain in its highly toxic hexavalent form rather than degrade to its less toxic trivalent form as would naturally occur in the environment. Due to the high pH of the COPR, the hexavalent chromium in the COPR is highly soluble in water and therefore freely leaches into the surface water and groundwater at the Site. In addition to chromium, the COPR contains toxic metals such as aluminum, antimony, barium, beryllium, cadmium, calcium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, silver, silicon, vanadium, zinc and titanium. The COPR at the Site is between fifteen and twenty feet deep.

As has been testified to by a number of the experts, hexavalent chromium has been classified by the EPA's Carcinogen Assessment Group as a Grade A Carcinogen through the inhalation exposure route and the EPA has ranked the potency of hexavalent chromium in the first quartile of human carcinogens. EPA has determined that hexavalent chromium is a more potent human carcinogen than arsenic, benzene and PCB's. NJDEP has also determined that hexavalent chromium is a known human carcinogen.

Both hexavalent and trivalent chromium have been found to cross the placental border so that birth defects, such

as cleft pallet, skeletal defects and neural tube defects have been attributed to both hexavalent and trivalent chromium in laboratory animals. Pregnant women exposed to chromium have been found to have three times as many clinical and delivery complications. Chromium exposure has been shown to cause mutation of mammalian cells, including chromosomal aberrations.

Hexavalent chromium can enter the human cell and cause DNA protein cross links which in turn cause cell abnormality and genetic mutation. Dr. Costa sampled chromium contaminated surface water from the Site and determined that the water at the Site may cause cell abnormality and genetic mutation. Humans may be exposed to hexavalent chromium through dermal contact, inhalation and ingestion. Such contact and exposure produces numerous and serious health problems as testified to by Drs. Anderson, Costa and Belsito.

Chromium is toxic to virtually every environmental receptor, with acute toxicity predominately from hexavalent chromium. The toxic effects of chromium in ecological receptors include reduced growth, reduced survival, reduced reproductive capabilities and birth defects. Total chromium has been adversely shown to impact benthic organisms. Chronic toxicity to saltwater vertebrates and invertebrates has been observed when the level of hexavalent chromium in the water ranges between 13 and 132 Ug/L. Chromium can also be acutely toxic to marine plants and cause reduced growth. Predators can receive chromium through the direct consumption of food items which contain chromium.

Based on these facts, the Court finds that exposure to chromium presents serious risks to human health and the environment. Testing at the site confirms that chromium is present and at significant levels above State standards.

SITE HISTORY AND OWNERSHIP SINCE 1954

The Site in question became the subject of numerous sales, transfers, mergers and acquisitions since Mutual ceased its operations in 1954. I will now review in some detail the aforementioned activity pertaining to the Site.

Mutual sold the Site to Amy Joy Realty Company (Amy Joy) in December of 1954. Honeywell acknowledges through the testimony of its witness Mr. Wong, that although Wong has reviewed hundreds of Mutual documents during his twenty-year involvement with the Site, he has never located or seen a Mutual or Allied document notifying any party that the Site contained approximately one million tons of COPR.

In July of 1965, Amy Joy as lessor, entered into a lease with Goodrich Associates (Goodrich) as lessee, pertaining to the 14.7-acre tract of vacant land which comprises the easterly portion, Lot 14H of the ECARG property (ground lease). This ground lease was for a period of thirty-one years and permitted extensions in increments of at lease ten years up to a total of ninety-nine years. The ground lease provided that the leased premises could be used for "commercial, mercantile, or services (bowling) enterprises or for the operation of residential or office properties ..." Grace 128,[2] p. 4. The ground lease provided further that Goodrich was required to construct a building of not less than 100,000 square feet on the leased premises referred to as the "Goodrich (Valley Fair) Building" and that Goodrich would own fee title to the building.

On July 23, 1965, Goodrich, as lessor, entered into a lease with Diana Stores Corporation, as lessee, under the terms of which Goodrich was to construct a building (the Goodrich Building) for Diana Stores' use on the 14.7-acre tract Goodrich leased simultaneously from Amy Joy under

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[2] "Grace" followed by a number refers to Grace Trial Exhibits in evidence.

the terms of the ground lease (the operating lease). The operating lease was for a period of thirty-one years and permitted two extension periods of ten years each. The operating lease provided that after the first eight years, the leased premises could be used for commercial or residential purposes. On July 23, 1965, Goodrich, as grantor, entered into an option agreement with Diana Stores, as grantee, whereby Goodrich gave Diana Stores the option to purchase a 50% interest in Goodrich's estate as lessee under the ground lease and its estate as lessor under the operating lease. Pursuant to the operating lease, Goodrich constructed a 180,800 square feet retail building on Lot 14H. On November 4, 1966, the Jersey City Superintendent of Buildings issued a Certificate of Occupancy to Goodrich for the Goodrich Building.

During Goodrich's construction of the retail building on Lot 14H, the New Jersey Department of Health conducted an occupational health study at the construction site and determined that several of the workers had contact dermatitis. Soil, water and air samples taken by the Department of Health on July 29, 1966 contained chromium.

No evidence was presented at trial that the health study mentioned above was ever provided to or the results shared with Goodrich, Diana or Daylin.

After construction was completed, the Goodrich Building was occupied by a Great Eastern Discount Store that subleased the building from Diana. In March of 1967, Goodrich and Diana entered into a joint venture agreement whereby Diana acquired an undivided one-half interest in both the Amy Joy/Goodrich ground lease and the Diana/Goodrich operating lease. By this joint venture agreement, Diana acquired an undivided one-half interest in the ownership of the Goodrich Building.

In 1969, Daylin, Inc. acquired Diana by merger. Daylin and Goodrich eventually became adversaries. In 1973, Daylin sued Goodrich in New Jersey Superior Court

alleging faulty construction of the Goodrich Building. A settlement resulted whereby Goodrich agreed to make repairs to the Goodrich Building. Daylin agreed to advance Goodrich one-half of the repair costs and Goodrich agreed to reimburse Daylin the monies it advanced at a later time.

In March, 1974, during the course of Goodrich's building repairs, the faulty building construction was described to Morris Rayburn, a Daylin representative, by Moe, a consulting engineer. Moe's observations included column distortions, missing bolts from connections that had never been installed, concrete strength well below established standards, rotting under floor conduits, pile caps that had not been imbedded, out of plumb walls and no binding of roof to deck through the entire system.

In May, 1974, Goodrich sued Daylin claiming that Goodrich had completed the building repairs as agreed to in the April, 1973 settlement agreement, but that Daylin failed to pay Goodrich all the advances owed for the building repairs as called for in the settlement.

In August, 1975, Daylin sublet the Goodrich Building to Valley Fair Jersey City, Inc. for operation of a discount food market and department store. The "net--net lease" was for a term of fifteen years at a rent of $280,000 per year. Extension periods of ten and seven years at an annual rent of $302,400 and $323,568 respectively were permitted.

The Goodrich (Valley Fair) Building was occupied as a discount store until sometime after 1979. Between January and March 1979, Mr. Pierson, Vice President of the retail group of Grace, visited Lot 14H and the Goodrich (Valley Fair) Building. At the time of Pierson's visit, the Goodrich Building was being operated as a discount store.

A videotape (Grace 1021), shown during the trial clearly depicted the destruction of the Goodrich (Valley Fair) Building caused by a phenomenon called heaving.[3] Based

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[3] Heaving will be explained later in this opinion.

on the foregoing, the Court finds that the Goodrich (Valley Fair) Building suffered from structural problems as early as the 1970's. These problems continued at the building through the 70's and 80's and ultimately resulted in the need to demolish the Goodrich (Valley Fair) Building in the mid 1990's. I specifically find that the structural problems experienced at the Goodrich (Valley Fair) Building were caused by heaving.

In January, 1979, W.R. Grace & Co. initiated a hostile takeover of Daylin. Prior to Grace acquiring the stock of Daylin, Grace had assembled a substantial group of retail businesses including Channel Home Centers, Orchard Hardware Supply, PayLess Cashways, Ole's, and Shepler Western Wear Stores. On March 20, 1979, Grace acquired the stock of Daylin. In connection with the acquisition, Grace caused Grace Retail Corporation (GRC) to be incorporated. Grace assigned the stock of Daylin to GRC on March 20, 1979. GRC was merged into Daylin on March 21, 1979, with Daylin being the surviving corporation.

Daylin acquired Lots 14H and 14J without knowledge of the contamination.

As testified to by Mr. Pierson, in or about the beginning of 1980, Daylin, with the approval of its majority shareholder Grace, developed a plan under which Daylin would maximize the value of its "excess properties". On or about February 26, 1981, a detailed memorandum which contained a comprehensive analysis of the status of Daylin's excess properties along with a plan for the disposition of the excess properties was submitted to Daylin's Board of Directors. The memorandum demonstrated that with respect to the Jersey City excess property, Lot 14H, the economics of Daylin's operating lease and the ground lease made it more advantageous for Daylin to purchase Lot 14H from General Cinema (successor by merger to Amy Joy), than to continue in the lessor-lessee relationship. In fact, Daylin was

obligated to pay in excess of $600,000 annually as a result of its operating lease and ground lease obligations. Thus, Daylin was interested in acquiring fee title to Lot 14H, the property occupied by the Goodrich (Valley Fair) Building. However, General Cinema, the property owner, would not sell Lot 14H without selling the adjacent property on which the drive-in movie theater was located, Lot 14J. As a result the plan for the Jersey City excess property called for the acquisition of both Lots 14H and 14J.

The transaction whereby Daylin would acquire Lots 14H and 14J involved a third party, Louis Feil. Feil's involvement in the acquisition had certain advantages. First, Feil was interested in purchasing another of Daylin's excess properties located in Elmont, New York. However, the tenant at Elmont, Times Square Stores, had a right of first refusal in its lease. In order to overcome the right of first refusal, it was necessary for Feil to offer a consideration that the Times Square Stores could not match. Feil's purchase of Lot 14H and the transfer of that property to Daylin as part of the consideration for the Elmont property created an offer which would be impossible for Times Square Stores to match. Second, Feil had a previous relationship with General Cinema and therefore it was believed that he might be in a better position to negotiate the price to be paid for Lots 14H and 14J. Third, there was a tax advantage to using Lot 14H as part of the consideration for Feil's purchase of the Elmont property.

Prior to Daylin's acquisition of Lots 14H and 14J, Pierson visited the property for a second time. During the second visit, Pierson was reassuring himself as to the position of the Goodrich (Valley Fair) Building on Lot 14H with respect to the adjacent property which Daylin was to acquire. Pierson wanted to make sure that the future development of Lot 14J would tie into the existing building and layout of Lot 14H. During this visit, Pierson went to the back of the Goodrich (Valley Fair) Building and decided it

would be possible to expand the development of the property onto Lot 14J if the Goodrich (Valley Fair) Building was to remain standing, and that it would also be possible to commercially develop the two lots together if the Goodrich (Valley Fair) Building was removed.

During this second visit, Pierson saw no abandoned drums, abandoned trucks, or yellow water on the property. He saw the movie screen from a distance, the projection booth, and another small building behind the Goodrich (Valley Fair) Building. Pierson testified that had he seen any yellow colored water or streams or drums when he visited Lots 14H and 14J prior to Daylin's acquisition, he would have reported it to Daylin's management.

Pierson and Daylin were aware of the construction problems with the Goodrich (Valley Fair) Building prior to Daylin's acquisition of Lots 14H and 14J. However, prior to acquiring those lots, Pierson did not know there was approximately one million tons of chromium waste on these properties. The faulty construction of the Goodrich (Valley Fair) Building was specifically noted in the February 26, 1981, memorandum to the Daylin Board of Directors. The lawsuit instituted by Daylin regarding the faulty construction was likewise referenced in the February 26, 1981, memorandum, as was the settlement of the construction defect lawsuit. The settlement agreement between Daylin and Goodrich clearly sets forth those parties' recognition of the faulty construction.

Neither Pierson nor anyone at W.R. Grace & Co. was aware that Lots 14H and 14J had environmental problems pertaining to chromium prior to Daylin's acquisition of those properties in 1981.

On May 29, 1981, Louis Feil acquired the ECARG property from General Cinema. On June 1, 1981, Feil transferred the ECARG property to Daylin. Daylin paid $1.2 million for Lots 14H and 14J in 1981 which amount represented the fair market value of those properties.

Mr. Coop, Grace's expert, testified at trial that a "site assessment" determines actual or potential releases of chemicals on property and assesses their damage. A site assessment is a subset of environmental due diligence. The first site assessments were performed by the EPA and state regulatory agencies as part of an agency's investigations or enforcement actions. Environmental agencies would hear about problems and initiate investigations. In 1981, there were no standards for performing environmental site assessments.

Mr. Coop further testified that as of July 1981, the retail department store industry in the United States was not performing pre-acquisition environmental site assessments. Mr. Coop was performing environmental site assessments at that time and would have advised his retail clients to undertake such environmental assessments if such a practice was recognized in the retail industry. He stated further that in 1981, the consciousness of environmental liability in that industry (retail) was, very low, and they (pre-acquisition site assessments) simply just were not being requested. The customary practice in the retail industry in 1981 was not to perform any pre-acquisition site assessments. As examples, Mr. Coop testified that Federated Department Stores did not perform environmental site assessments prior to 1988, and that another large discount chain, Bill's Dollar Store, did not perform environmental assessments until 1990.

The State of New Jersey did not adopt the Environmental Cleanup Responsibility Act (ECRA), now the Industrial Site Recovery Act (ISRA), until 1984. That legislation required certain categories of properties to be assessed before they could be transferred. Retail stores were not subject to the ECRA requirements. Recognized standards for performing environmental site assessments did not come into being until approximately 1986. Since then, the standards have been refined to the point where they are now very formal.

Under the 1986 agreements wherein Channel purchased the Channel Home Centers business from GRC, W.R. Grace & Co. agreed with Channel that as between Channel and Grace, Grace would be responsible for liabilities relating to the ECARG property.

Mr. Coop testified that in 1986, intra-company transfers of real property, such as that between GRC and ECARG (more fully discussed below), did not trigger an environmental site assessment because the perception was that you could not create a liability merely by transferring property from one subsidiary to another.

Mr. Coop reviewed the 1981 transaction documents as well as his own work from the early 1980's and had his staff contact certain retail department stores and also spoke to Mr. Pierson. During cross-examination, Mr. Coop was asked, "and hypothetically speaking, if an individual from Daylin had gone onto the site and had observed an abandoned tank car, had observed pools of yellow liquid, had observed drums with liquid seeping from them, had observed rivers of colors green and colors yellow, and that was relayed to you by Mr. Pierson, would that change your opinion in this case?" Mr. Coop responded, "No, I don't think it would", adding:

> The issue here is not so much whether we have these chemicals there; it is what did they mean to people in 1981. So, if the person from Daylin had environmental knowledge, then I think maybe the answer would be yes, it should mean something to them; but if they didn't, I don't know as they would have viewed this as anything other than an expense to be fixed before they could rent the property.

Mr. Coop further testified that in his opinion, even if hypothetically Daylin knew that Lots 14H and 14J contained chromium waste, Daylin might have still purchased the

property. Specifically, Mr. Coop testified "as scary as that sounds in 2003, in 1981, my expectation would be that Daylin would not necessarily have reacted negatively to that."

Mr. Hart testified on behalf of Honeywell as a due diligence expert. He was asked to provide an opinion as to whether Daylin knew or should have known about the environmental condition of the Site prior to Daylin's acquisition of Lots 14H and 14J. Mr. Hart acknowledged that he never spoke to anyone at Daylin, Grace or any of their subsidiaries regarding their knowledge of the Site in 1981. Mr. Hart also stated that he did not know what Daylin, Grace or its subsidiaries knew about the Site in June 1981. Accordingly, he acknowledged that his opinion was limited to what those entities "should have known".

In preparation for his testimony, Mr. Hart reviewed various documents including seventeen documents dated prior to June 2, 1981, (DH 12,[4] DH17, DH18, DH19, DH20, DH22, DH23, DH25, DH125, DH127, DH202, DH358, DH534, DH589, DH631, DH634 and DH739). These documents deal with construction related problems. Of the seventeen documents just mentioned, the words "contaminated" or "contamination" appear in only three of the documents and the words "health hazard" or "carcinogen" appear in none.

Although Mr. Hart relied on the aforementioned documents as the basis for his opinion that Daylin "should have known", he presented no evidence that either Daylin or Grace, or any of its subsidiaries actually ever received the documents he relied upon. For example, on cross-examination, Mr. Hart acknowledged that although DH534, an April 15, 1981 letter from Goodrich to Daylin regarding the lease between Goodrich and Diana was drafted prior to

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[4] "DH" followed by a number refers to Honeywell's Trial Exhibits in evidence.

Daylin's acquisition of the Site, it was not received by Grace until after Daylin's purchase. DH534 was stamped received by Mr. Pierson on June 8, 1981 and by Frank Shea, who worked for Mr. Pierson, on June 9, 1981. Mr. Hart admitted that his review of the documents referenced in his expert report confirm that the documents addressed construction rather than environmental problems with the Goodrich (Valley Fair) Building. Although Mr. Hart's company, Fred C. Hart & Associates, conducted an environmental site inspection at the Site for the EPA in March or April of 1981, and found that the Site was contaminated with hexavalent chromium and posed a human health hazard, neither Mr. Hart nor his firm, nor the EPA nor NJDEP ever notified Amy Joy (General Cinema) or Daylin prior to June 2, 1981 that the Site was contaminated with hexavalent chromium.

Mr. Hart testified that the NJDEP and the EPA knew the Site was contaminated with chromium prior to March of 1981, however NJDEP did not notify Daylin of the contamination until April of 1982, almost one year after Daylin acquired Lots 14H and 14J.

Based on the foregoing, I find that at the time Daylin acquired title to Lots 14H and 14J in June of 1981, neither Daylin nor Grace had knowledge of the fact that Lots 14H and 14J were contaminated with chromium, or that the Site was filled with approximately one million tons of COPR. Nor does the evidence support Honeywell's theory that they should have known.

Grace and Daylin have exercised due care and have fully cooperated with the NJDEP. During trial, issues arose as to which parties did or did not cooperate with NJDEP regarding their responsibilities at the Site, and if they did cooperate, to what extent.

I find that Honeywell was less than cooperative and embarked on a dilatory, foot-dragging scheme for twenty years. I will discuss Honeywell's actions later. I will now

deal with the Grace Defendants and their actions during this same time period.

As owners of the property, Grace also had responsibilities once they learned of the extent of the contamination. In late November 1981, Jersey City filed a municipal court complaint against Daylin complaining that excessive vegetation, rubbish and hazardous materials in drums existed at the theater property, Lot 14J. On December 29, 1981, Mr. Dorner, on behalf of Daylin, advised Jersey City that Daylin had just recently acquired the property, and it had no knowledge who was responsible for the dumping at the property. However, Daylin would take the necessary steps to remove the drums and other materials that had been abandoned on the theater property by unknown third parties.

On or about February 18, 1982, Grace, as parent of Daylin, authorized CECOS International to proceed with the removal of the drums as discussed with Jersey City in the December 29, 1981, letter.

In a memorandum dated March 29, 1982, Mr. Dorner made record of a conversation he had with Tex Aldredge, Director of Jersey City's Hazardous Waste Task Force, wherein Mr. Aldredge told Mr. Dorner that the ECARG property was a "big financial problem". On April 28, 1982, a meeting occurred at the ECARG property attended by representatives of NJDEP, Jersey City, Grace, Daylin and their environmental consultants regarding the environmental issues relating to the Site.

On May 3, 1982, the City of Jersey City notified Allied (now Honeywell), as successor to Mutual, that the ECARG property posed a danger to the public health, safety and welfare.

In May of 1982, Charles Brooks, a Senior Vice President at Grace, on behalf of Daylin, advised David Shotwell of the NJDEP that although Daylin had just recently acquired title to the property in question, and had no involvement whatsoever with any of the contamination

which may exist at the property, Grace agreed to the following: (1) "retain CECOS International to remove the thirty-eight waste-containing drums and surrounding contaminated soil, if any, from those drums by May 7, 1982; (2) analyze and remove the abandoned tank truck from the Site; (3) install a fence around the property to prevent access and (4) retain the firm of Geraghty & Miller, Inc. (environmental consultants) to analyze the conditions at the Site." In addition, Mr. Brooks provided NJDEP with analytic results of the samples taken from the Site.

By letter dated May 26, 1982, Mr. Brooks advised Mr. Aldredge that the drums had been removed and confirmed his understanding that Mr. Aldredge would dismiss the municipal court complaint filed against Daylin. By letter dated May 28, 1982, Mr. Brooks confirmed to Mr. Shotwell that all drums had been removed from the property and that CECOS advised that the tank wagon did not contain hazardous waste.

On June 9, 1982, Thomas R. Kelley, Executive Director of the Jersey City Economic Development Corporation noted in a Jersey City memorandum that "there is no question that W.R. Grace, when they purchased the land (the ECARG property), had no idea of the problem that existed under the surface of the Site."

In June of 1982, approximately one year after Daylin purchased the ECARG property, the U.S. Environmental Protection Agency (EPA) notified Grace that the ECARG property contained high levels of chromium with a significant level of hexavalent chromium ions. By letter dated July 6, 1982, Mr. Brooks advised Mr. Shotwell that the ECARG property was previously owned by Mutual which merged into Allied in 1955. Mr. Brooks requested that the NJDEP use its enforcement powers to bring Allied, Mutual's successor, into the proceeding since Allied was responsible for any pollutants left on the property by Mutual.

By letter dated July 23, 1982, NJDEP formally thanked Grace for its cooperation and prompt remedial actions at the property and advised Grace that NJDEP was investigating the identity of parties responsible for the contamination.

In July 1982, Grace, on behalf of its subsidiary Grace Retail Corporation, retained Geraghty & Miller to investigate groundwater quality conditions at the property. The purpose of the study was to determine the chemical characteristics and thickness of the fill material beneath the ECARG property and to evaluate the quality of on-site ground and surface water. Geraghty & Miller directed the installation of five monitoring wells, installed a well near the bulkhead and set up three surface water measuring stations. Geraghty & Miller noted that the ECARG property contained five to eighteen feet of fill with two to ten feet of sandy silt beneath it. Selected soil samples revealed total chromium values ranging from 2,500 mg/kg(ppm) to 35,000 mg/kg(ppm) and hexavalent chromium values up to 4,800 mg/kg(ppm). The Geraghty & Miller investigation report was issued in February 1983 and Grace furnished Allied with a copy of the report. Geraghty & Miller discussed its study with NJDEP officials before and during its investigation. Since 1982, Grace and ECARG have cooperated with the NJDEP in connection with its ongoing efforts to have Honeywell investigate and remediate the chromium contamination at the property.

In January 1985, NJDEP issued a Directive Letter to Grace simultaneously with an identical Directive Letter to Allied (Honeywell). The letters required Grace and Allied to each pay $2.4 million to NJDEP so that NJDEP could undertake an RI/FS study at forty chromium sites in Hudson County (other than this site). NJDEP claimed that the forty other sites contained COPR from Mutual's Jersey City chrome plant and the Site. NJDEP did not require Grace to take remedial measures regarding the discharge of

hexavalent chromium from the Site. The Directive Letter did not in any way address the COPR located at the Site. On February 6, 1986, Grace responded to the letter stating that Grace had been cooperating with NJDEP for two years in connection with Lots 14H and 14J, that Grace Retail Corporation and not W.R. Grace & Co. was the owner of Lots 14H and 14J and that Grace Retail Corporation was only a passive owner.

NJDEP never pursued the Directive Letter against Grace, but instead focused its enforcement efforts on the chromium producers including Allied. Thereafter, NJDEP issued multiple Directives to Allied pertaining to the property. No further NJDEP Directives were issued to any of the Grace defendants.

I find that Daylin and ECARG exercised due care and have fully cooperated with NJDEP. I find further that Daylin acquired fee title to Lot 14H and 14J in June of 1981; that Daylin acquired Lot 14H and Lot 14J after Mutual's discharge of the hazardous waste at the property; that at the time Daylin acquired Lots 14H and 14J, it did not know and had no reason to know that any hazardous substance had been discharged at the property; that Daylin did not discharge the hazardous substance, is not responsible for the hazardous substance, and is not a corporate successor to the discharger or any entity in any way responsible for the hazardous substance, or to anyone liable for cleanup and removal costs; that Daylin notified NJDEP of Allied's (Honeywell's) responsibility for the hazardous substance located at Lots 14H and 14J after the actual discovery of the discharge; that Daylin and Grace fully cooperated with NJDEP upon the actual discovery of the discharge of the hazardous substance; and that at the time of Daylin's acquisition of Lots 14H and 14J, it made all appropriate inquiries as to the previous ownership and uses of Lots 14H and 14J based upon the generally accepted good and customary standards being followed at the time.

THE INTRA-CORPORATE TRANSFER OF LOTS 14H AND 14J TO ECARG

In 1986, W.R. Grace & Co. made a corporate decision to divest its interest in the retail home improvement business in order to raise capital for corporate purposes. The Channel Acquisition Company (Channel), composed of the management of W.R. Grace & Co.'s Channel Home Center business, was formed to purchase the Channel Home Center business from W.R. Grace & Co. In November 1986, Channel acquired the stock of Grace Retail Corporation from W.R. Grace & Co. As part of the November 1986 acquisition of Grace Retail Corporation (GRC) by Channel, a repayment and distribution agreement was executed between W.R. Grace & Co., W.R. Grace, Ltd., and GRC on November 26, 1986. This agreement transferred non-operating assets out of GRC. This was accomplished because Channel only wanted to purchase the operating Channel Home Center stores, rather than incur the obligations associated with any non-operating assets of GRC. The repayment and distribution agreement provided that Grace was to receive a distribution of certain non-cash assets of GRC, including Lots 14H and 14J.

In connection with the sale of the Channel Home Center business in November of 1986, Grace directed that fee title to Lots 14H and 14J be transferred from GRC to ECARG. As a part of the transfer of title, Grace caused two deeds to be prepared in November of 1986 whereby GRC and ECARG intended that fee title to Lots 14H and 14J be transferred from GRC to ECARG. As part of the transfer of title to those lots, GRC and ECARG executed an "Assignment of Leases and Joint Venture" dated November 26, 1986, whereby GRC's interest in the ground lease, the operating lease, and the joint venture agreement was assigned from GRC to ECARG. As part of the transfer of title to Lots 14H and 14J, Goodrich and ECARG executed a new Joint Venture Agreement dated November 26, 1986,

that superceded and replaced the March 15, 1967 Joint Venture Agreement between Goodrich and Diana. On December 4, 1986, John Poggioli, a real estate counsel at W.R. Grace, wrote Goodrich advising them that GRC had transferred all of its interest in Lots 14H and 14J to ECARG as of November 26, 1986.

In 1994, Plaintiff, ICO, notified Channel Home Center, Inc. that it was going to commence suit against Channel Home Center as owner of Lots 14H and 14J. Channel Home Center notified Mr. Nagy of Grace of the ICO notice and Mr. Nagy investigated, believing that ECARG, not Channel, already had fee title to the property. Based upon this investigation, it was determined that the two deeds transferring Lots 14H and 14J from GRC to ECARG prepared in 1986 were inadvertently not executed and recorded.

In October 1994, the two deeds were executed and recorded to formally memorialize the intended and *de facto* transfer to ECARG on November 26, 1986, of fee title to Lots 14H and 14J. During the period 1986 through 1994 when the deeds were finally recorded, both W.R. Grace and Honeywell held out and referred to ECARG as the owner of Lots 14H and 14J. ECARG is the current owner of the ECARG property.

Based on the foregoing, testified to by Mr. Nagy at trial with supporting documentation, I find that ECARG held constructive title to Lot 14H and Lot 14J from November 26, 1986, to October 14, 1994, when ECARG obtained full legal title to the ECARG property.

I find further that the evidence presented at trial clearly indicated that ECARG has, since it acquired the ECARG property in November 1986, exercised due care and has cooperated with the NJDEP in connection with its ongoing efforts to have Honeywell investigate and remediate the chromium contamination at the Site. In so doing, ECARG contributed $89,750 toward the costs of interim

remedial measures installed by Honeywell at the property. In 1990, ECARG provided cooperation to Honeywell in connection with its repair of the bulkhead at the ECARG property, which was required to prevent further discharges of COPR from the ECARG property into the Hackensack River.

In 1994, ECARG incurred costs to demolish the former Goodrich (Valley Fair) Building which had become structurally unsound and unuseable and presented a risk to the public due to the heaving of the COPR.

In 1997, ECARG entered into a license agreement with Honeywell to provide it with continuing access to the property so that Honeywell could conduct a cleanup of the chromium contamination. The license agreement requires Honeywell to fully and completely comply with all applicable laws which would include but not be limited to cleaning the ECARG property to the NJDEP residential soil criteria of 240 ppm.

In 1995, Grace, on behalf of ECARG, cooperated with NJDEP to remove three underground storage tanks that were associated with the operations of the former gas station/car wash tenant at Site 157. Dames & Moore, Grace's environmental consulting firm, submitted an underground storage tank closure plan to NJDEP that was approved by NJDEP in May of 1995. Dames & Moore investigated and removed all petroleum contaminated soil associated with the underground storage tanks. In 1999, NJDEP confirmed that the petroleum contaminated soil was remediated to NJDEP's stringent cleanup standards. In the course of removing the petroleum contaminated soil, Grace, on behalf of ECARG, incurred increased disposal costs of $126,000 because the petroleum contaminated soil was also contaminated with chromium which required special, more expensive disposal.

Also in 1999, Grace received NJDEP approval for a natural attenuation monitoring remedy for the petroleum

groundwater contamination at Site 157. Grace, on behalf of ECARG, is implementing the NJDEP approved groundwater monitoring remedy.

HONEYWELL'S DILATORY TACTICS

After twenty years of studies, debate, negotiation and delay, there is no permanent remedy for the Site. On May 3, 1982, the City of Jersey City notified Allied, as successor to Mutual, that the ECARG property posed a danger to the public health, safety and welfare. In October of 1982, NJDEP wrote Allied and requested information regarding the materials which Allied placed at the Site. On February 1, 1983, Allied responded to NJDEP acknowledging Mutual's disposal of significant quantities of chrome ore processing waste at the Site.

On April 28, 1983, NJDEP wrote to Allied confirming the following: (1) there was as much as one million tons of COPR at the Site, (2) the COPR was toxic, (3) the groundwater at the Site exceeded New Jersey Standards for chromium content, (4) the pH at the Site exceeded applicable standards, and (5) approximately 12,600 gallons per day of groundwater was being discharged from the Site into the Hackensack River. NJDEP directed Allied to prepare a plan to fully delineate the extent of the contamination at the Site within sixty days and to implement pollution abatement measures necessary to protect the public health and environment from the hazards posed by the chrome ore processing waste discharged by Mutual at the Site.

On June 27, 1983, Allied responded to NJDEP's April 28 letter advising that it would begin to take steps to investigate the contamination of the Site caused by the COPR placed at the Site by Mutual. For the next twenty years, Allied (Honeywell) and representatives of NJDEP discussed, debated and negotiated the appropriate measures necessary to remediate the Site and eliminate any dangers

posed to the environment. There is no question but that Honeywell (Allied) has known of the chromium contamination at the Site since 1982, and although they have been directed by NJDEP on numerous occasions to take steps necessary to provide a permanent remedy for the property, Honeywell has failed to do so. The trial record is replete with instances of Honeywell's avoidance tactics. Rather than respond and solve the problems, Honeywell continually took the path of further testing, further debate and negotiation.

As an example of Honeywell's behavior, Mr. Faranca who testified on behalf of NJDEP, experienced a pattern whereby Honeywell, when faced with proposals relating to the remediation of the Site, would make a proposal, NJDEP would reject it, it would be discussed, and sometime thereafter, Honeywell would return with the same or a similar rejected proposal. This pattern occurred frequently during the twenty-year period and frustrated DEP's continued efforts to design an appropriate permanent remedy for the Site. It became clear to me, that the NJDEP was understaffed and overworked, and therefore, susceptible to these and other delaying tactics.

HONEYWELL'S INTERIM REMEDIAL MEASURES DO NOT ELIMINATE EXPOSURE PATHWAYS

An Interim Remedial Measure ("IRM") is a discrete action or set of actions, used to address both emergency and non-emergency environmental threats, that can be conducted without the extensive evaluation of a remedial investigation or feasibility study.

On April 28, 1983, NJDEP notified Honeywell that the Site was contaminated with chromium that exceeded levels deemed acceptable by the State. NJDEP instructed Honeywell to "take measures necessary to protect the public health and the environment from hazards posed by the wastes deposited at the Mutual Site." Honeywell was

directed to submit, within 60 days, plans to (1) remove all contaminated material from the Site to restricted areas where the public could not contact them, and to (2) "fully delineate the extent of contamination." Honeywell took no such actions in the 60-day period.

When no interim or permanent remedial measures had been implemented by December 1988, NJDEP issued a Directive, which ordered Honeywell to install IRMs t the Site. NJDEP listed the Site as a "high priority Site." NJDEP expressed concern over the threat posed by the discharge of chromium into the waters of the State and the effects of chromium exposure on human health.

Pursuant to the December 1988 Directive, on April 3, 1989, Honeywell submitted a work plan to NJDEP for the implementation of IRMs at the Site. NJDEP rejected the work plan because it was incomplete.

In July 1989, Honeywell submitted a revised work plan. On August 3, 1989, NJDEP determined that the plan was still incomplete and directed that certain items be included. In its first comment, NJDEP directed that the plan must be revised to include the following statement:

> The purpose of the IRMs to be implemented are to prevent the discharge of chromium and its compounds by way of all routes of potential human exposure and shall include measures to prevent the airborne, erosional or surface water runoff of chromium contamination. (emphasis added)

On August 4, 1989, Honeywell responded to NJDEP by letter and submitted another revised work plan:

> All comments cited in your letter have been incorporated in this submittal, with the exception of comment number 1. I'm sure NJDEP is aware that proposed IRM measures will substantially

reduce potential discharges of chromium and its compounds through various routes. However, to "prevent" all discharges of chromium compounds at the Daylin-Grace Site is beyond the scope of these interim measures. (emphasis added)

NJDEP conditionally approved this work plan on August 31, 1989.

This Court finds that the IRMs have been damaged consistently since their installation and have been constantly in need of repair. However, Honeywell has only repaired the when specifically ordered to do so by NJDEP.

As early as March, 1992, Honeywell identified tears and rips in the two-year old IRM geomembrane liner. The damage was attributed to inclement weather conditions. In an effort to prevent further damage, in June 1992, Honeywell covered four acres of the damaged geomembrane with a geotextile cover and crushed rock. There is no evidence that the damage to the liner was repaired.

In February 1993, Honeywell identified cracks in the asphalt IRM cap. NJDEP required Honeywell to patch the cracks with tar or asphalt. At the same time, the additional 14 acres of geomembrane, which had remained exposed since installation, were covered with geotextile and crushed stone.

By 1993, the extent of damage to the geomembrane IRM liner was so great that it required approximately 55,400 feet of PVC material to patch damaged areas. In addition, approximately 240 holes were patched.

On October 31, 1995, NJDEP inspected the Site 115 IRM. NJDEP observed "several deficiencies" at the Site and ordered Honeywell to address those deficiencies "as soon as possible to protect human health and the environment." NJDEP expressed particular concern with "leaks" and "breaks" in the liner system, which allowed chromium-contaminated surface water to discharge from the Site into the Hackensack River. The inspection identified areas where

the geomembrane and geotextile were exposed. At the same time, "yellow-green water" was observed discharging from the swales into the Hackensack River.

In response to NJDEP's order, Honeywell prepared a work plan in March 1996 for liner repairs to the south swale liner and the liner near the south end of the former Valley Fair building foundation. The repairs were designed to prevent the migration of chromium-contaminated on-site soils and groundwater.

NJDEP rejected Honeywell's March 1996 work plan because it did not address the on-going discharge of yellow water into the Hackensack River as required in the 1988 Directive. In doing so, NJDEP ordered Honeywell to develop: a comprehensive plan to control the groundwater and surface water emanating from the Site that would be consistent with a final remedy; a detailed plan to protect human health and the environment; and an engineering evaluation of the integrity of the existing liner:

> [The March 1996 IRM Work Plan] does not address a continuing discharge of yellow water into the Hackensack River as noted during the inspection at the north ditch. The yellow water noted in the swales during the inspection is a result of ground water from beneath the liner, migrating to the surface from cracks in the liner or moving beneath the liner directly to the river. This ground water is in excess of the New Jersey Surface Water Quality Standards (50 ppb hexavalent chromium). Be advised, the Department has a growing concern and a heightened awareness of this impact to the environment. This problem which has continued at least since February 1983 * * * needs to be addressed.
>
> * * * * * *

> The interim remedial measures installed at this location in the winter of 1989/1990 were designed to last 5 years to enable the Department and Allied sufficient time to perform the remedial investigation, feasibility study and remedial action design. In the interim, this work has not taken place, and this IRM has continued to deteriorate. * * * It is therefore, the Department's opinion that Allied must begin to develop a comprehensive plan to control the ground water and surface water which is emanating from the Roosevelt Drive-In Site (Site 115). It is envisioned that such a plan must consider long term control such that it would be consistent with all final remedial actions at this site.

In August 1996, Honeywell submitted a supplemental IRM work plan. On October 29, 1996, the NJDEP conditionally approved Honeywell's supplemental work plan, stating that "these measures are considered interim in nature." However, NJDEP remained concerned that Honeywell's work would "do nothing to prevent the yellow water from discharging to the river," that "the bulk of the contamination is still discharging via groundwater underneath the liner directly to the river," and that, based on Honeywell's IRM work plan, NJDEP "cannot be certain that other portions of the liner have not deteriorated...."

Honeywell observed damage to the asphalt and concrete paving and IRM liner during inspections conducted on August 3 and September 1, 1998.

The record is replete with evidence that the geotextile cover and geomembrane liner at the Site are significantly damaged due to wear and tear and/or as a result of the extensive surface heaving that takes place at the Site. This Court finds that Honeywell's IRMs have consistently failed to prevent the discharge of chromium into the Hackensack River. Based on the past twelve years of repeated IRM

failures and ineffective upgrades, I find that the IRMs present at the Site are not sufficient to prevent the migration of chromium from the Site into the environment including the groundwater below, the air and the Hackensack River. I find further that the liner and cover are inadequate to prevent human and environmental contact with chromium from the Site. I also find that the asphalt and concrete IRMs are inadequate to prevent human and environmental contact with chromium from the Site.

There is also evidence of human trespass such as holes and damage to the fence, discarded food and wrappers, toys, fishing poles and equipment, as well as graffiti. All of this evidence makes it clear that trespassers enter the Site. Once on the Site, trespassers may come into contact with the hexavalent chromium contamination in the soil through breaches in the cap and with surface water and shallow groundwater which has seeped to the surface of the Site.

Accordingly, I find that Honeywell has failed to maintain a protective fence and warning signs around the Site to prevent unauthorized access to the Site. It should be noted, that even if a fence were properly maintained, this would in all likelihood not prevent wildlife from entering the Site and being exposed to chromium contamination.

The above supports my view that removal of the COPR is the only viable remediation and, unless someone is appointed to oversee the project, it will not occur. Honeywell's failure to delineate the extent of the contamination at the Site and implement a permanent remedy has been well documented and I will not repeat it again here.

I find that through Honeywell's actions, or more appropriately inactions, they have failed to design a permanent remedy which would satisfy NJDEP's 240 parts per million soil cleanup criteria, and therefore has allowed the property to remain a risk to human health and the

environment. As will be discussed below, the Court will appoint a Special Master to oversee remediation of the Site.

SITE REMEDIATION

A permanent remedy is necessary to eliminate the imminent and substantial endangerment to health and the environment caused by the condition of the Site. As stated earlier, the Court was most impressed with the testimony of Dr. Brown. His testimony was the most complete and coherent regarding the various types of remediation that are available. He discussed each of these alternatives in detail and explained why each, except one, was rejected. I find his testimony to be reasonable, credible and compelling. In fact, no reasonable or compelling testimony was offered in contradiction of Dr. Brown. Accordingly, I find that the most reasonable and appropriate remediation method for the entire site is to excavate, remove, treat, and refill with clean fill.

In addition to the contaminated soil which must be removed, I am also concerned about the contaminated deep groundwater at the Site which may also present an imminent and substantial endangerment to health or the environment. This problem requires further study. Accordingly, Honeywell will be required to test and fully delineate the extent of chromium contamination in the deep groundwater at the Site in order to ensure that this contaminated water does not discharge to the Hackensack River, or flow to any fresh water aquifer that is used as a water supply, or to the bedrock. If it is found that the contaminated deep groundwater beneath the Site is discharging or threatening to discharge, into the Hackensack River or any other surface water body, or is migrating, or threatening to migrate into the bedrock or an area of a freshwater aquifer that is used as a drinking water supply, Honeywell must take appropriate remedial actions necessary to prevent such discharge or migration. Depending on these test results, the Court will enter a further injunctive order setting forth the appropriate

relief. The Court will rely upon the tests and the recommendations of the Special Master in determining appropriate relief.

I also find that the discharge of chromium from the Site to sediments in the Hackensack River has caused an imminent and substantial endangerment which must be remedied. Honeywell will be required to remedy the chromium toxic hot spots in the Hackensack River which are affected by the Site so that such hot spots do not exceed the State's ER-M Standard of 370 ppm total chromium.

This Court is not unmindful of the potential costs involved. Dr. Brown estimates costs for remediation could be $400 million. However, due to the nature of the waste, and the heaving phenomenon, short of a restricted use of the property, total excavation and fill is the only viable remediation alternative.

The present owners of the property (Grace) have stated that they refuse to agree to a deed restriction. Furthermore, as their real estate experts testified, if the Site were cleaned up it would have great value as residential property. The present owners played no part in the property contamination and were innocent purchasers when they obtained the property. I see no reason why this Court should dictate as to how they should ultimately use the property. Furthermore, the evidence shows that Jersey City officials also believe the property should be developed as residential, if possible. Therefore, it is assumed that the property will eventually be used for residential housing.

Honeywell offered a witness, Mr. Deming, who testified at some length regarding an experimental "floating" foundation which would allow a large retail structure (100,000 to 150,000 square feet) to be built on top of the COPR. Even if the Court accepts Mr. Deming's testimony regarding this experimental foundation, he acknowledges no residential housing could be built at the Site.

In addition to the obvious problems caused by the hexavalent chromium contamination and the potential health hazards associated with it, the Site suffers from the phenomenon described as heaving. None of the witnesses seemed to be sure as to why this phenomenon occurs, however all of those knowledgeable with heaving agree that it does occur, and will continue to occur indefinitely. The Court takes this to mean that it may continue decades into the future, unless the problem is addressed now.

HEAVING

This geo-technical problem refers to the large bumps and ridges that appear on the surface of the property as a result of a chemical reaction that causes the expansion of the COPR beneath the property surface. These ridges rise several feet high and destroy or damage anything that is constructed at the surface, such as buildings or even parking lots. In addition, heaving will cause problems with utilities which would normally be built under the ground, such as sewer or water lines. Despite years of study and testing, no solution has been found to solve the heaving problem. It is impossible to predict when or where the heaving will occur and therefore it is impossible to build on or pave over the property. The only rational solution is removal of the COPR.

Although Mr. Deming did arrive at a possible solution when building a large retail structure, he acknowledged that the same type of foundation would not be viable for multiple dwellings or high rise type apartments in excess of five stories. These are precisely the types of residential dwellings contemplated by the property's owner.

In addition, other testimony was offered that convinced the Court that the only appropriate remedy is excavation and removal. Any other type of remedial action would require substantial maintenance for years, and a recognition that future generations would be required to

abide by whatever restrictions were placed on the property. The Court realizes that to cap or otherwise wall off and treat this property would create maintenance problems for decades into the future. Human nature being what it is, I am not satisfied that future generations will necessarily abide by today's restrictions. Accordingly, the only viable remedy is excavation, removal and treatment and refilling with clean fill.

It is the finding of this Court that: (1) heaving at the Site is caused by COPR; (2) heaving will continue to occur at the Site for an indefinite period of time and it is impossible to predict the depth and magnitude of the heaving; (3) heaving caused serious structural damage to the Goodrich (Valley Fair) building requiring its demolition; (4) capping the property is not a viable environmental remedy due to the fact that heaving would destroy the cap and allow the contaminated substance to become airborne and contaminate surface water and ground water; and (5) the property cannot be developed due to the heaving unless the COPR is removed.

PLAINTIFFS' CLAIMS AGAINST GRACE AND RONED UNDER RCRA

Plaintiffs also assert claims against the Grace Defendants and Roned under RCRA § 7002(a)(1)(B), 42 U.S.C. § 6972(a)(1)(B), however I find that neither Grace nor Roned ever engaged in the disposal or other relevant activity regarding the approximately one million tons of COPR that Mutual disposed of at the Site and therefore I find that there is no basis for imposing liability on the present owners of the property.

Plaintiffs rely upon United States v. Price, 523 F.Supp. 1055 (D.N.J.1981) affd. on other grounds 688 F.2d 204 (3d Cir. 1982) basing its allegations on the Defendant's "passive indifference" as a property owner. However, the plain language of RCRA makes clear that liability should

only be imposed on those who actively manage or dispose solid or hazardous waste. The Court accepts Defendant Grace's argument that a straight forward reading of RCRA compels a finding that only active human involvement with the waste is subject to liability under § 7002(a)(1)(B). Accordingly, I find that the only responsible party is Honeywell. (See Conclusions of Law *infra*).

DAMAGES SUFFERED BY ECARG

ECARG, Inc., a present owner of the property, claims to have suffered or will suffer in the future, significant damages as a result of the property contamination caused by Honeywell. I make the following findings regarding ECARG's alleged damages.

Lost Rents

On July 20, 1965, Amy Joy, as lessor, entered into a lease with Goodrich as lessee, pertaining to the 14.7 acre tract of vacant land which comprises the easterly portion (Lot 14H) of the property (ground lease). On July 23, 1965, Goodrich entered into a lease with Diana Stores, as lessee, under the terms of which Goodrich was to construct the Goodrich Building for Diana Stores' use on the 14.7 acre tract which Goodrich leased simultaneously from Amy Joy under the terms of the ground lease (operating lease). On July 23, 1965, Goodrich, as grantor, entered into an option agreement with Diana Stores as grantee, whereby Goodrich gave Diana Stores the option to purchase a 50% interest in Goodrich's estate as lessee under the ground lease and its estate as lessor under the operating lease. The certificate of occupancy for the Goodrich Building which was constructed pursuant to the requirements of the operating lease was issued on November 4, 1966. On March 15, 1967, Goodrich and Diana Stores entered into a joint venture agreement whereby Goodrich sold to Diana Stores a one-half interest in Goodrich's estate as lessee under the ground lease and its

estate as lessor under the operating lease. Diana Stores was merged into Daylin on December 16, 1969.

Daylin succeeded to Diana Stores' interest as the lessee under the operating lease and the owner of a 50% interest in the lessee under the ground lease. On October 31, 1972, Amy Joy was merged into its parent corporation, General Cinema Corporation. On March 20, 1979, W.R. Grace & Co. and W.R. Grace Ltd. acquired the stock of Daylin. W.R. Grace & Co. and W.R. Grace, Ltd. assigned the stock of Daylin to Grace Retail Corporation on March 20, 1979. GRC was merged into Daylin on March 21, 1979. On May 29, 1981, Louis Feil acquired the ECARG property from General Cinema. On Monday, June 1, 1981, Feil transferred the property to Daylin. As of June 1, 1981, Daylin, having succeeded to the interest of Amy Joy (General Cinema) as the fee owner of Lots 14H and 14J, became the lessor under the ground lease. On May 21, 1982, Daylin changed its name to Grace Retail Corporation. In 1986, Lots 14H and 14J (the ECARG property) were transferred from Grace Retail Corporation to ECARG as the result of an intra-corporate transaction.

The Goodrich (Valley Fair) Building consisted of 180,900 square feet of space. As of May 1990, the fair market rental value of the Goodrich (Valley Fair) Building was $2.50 per square foot.

ECARG, a successor to Daylin, as lessee under the operating lease, as holder of a 50% interest in the lessor under the operating lease, as holder of a 50% interest in the lessee under the ground lease, as lessor under the ground lease and as fee owner of the ECARG property could, but for the heaving problem, have subleased the Valley Fair Building in 1990 for an annual rent of $452,250 on a triple net basis (180,900 square feet times $2.50 per square foot equals $452,250). The Valley Fair Building was vacant as of February 1981. If the Valley Fair Building could have been sublet commencing in May of 1990, ECARG would have

had expenses against the $452,250 in annual rental it would have realized from the subleasing of the Valley Fair Building. The expenses against the subleasing of the Goodrich (Valley Fair) Building in 1990 would have consisted of the operating lease rent, which had two components. First, $18,229.17 per month, or $218,750 annually, plus the incremental increase in ground lease rent totaling $30,057 annually. The monthly loss experienced by ECARG as a result of its inability to sublease the Valley Fair Building equals $16,953.83 commencing in May of 1990. The inability to sublease the Valley Fair Building because of the heaving also caused ECARG to lose its 50% portion of the profit that ECARG/Goodrich joint venture would have realized as lessor under the operating lease. That 50% portion of the profit of the joint venture totaled $816.91 per month beginning May 1990.

ECARG's inability to sublease the Goodrich (Valley Fair) Building also caused it to lose the rental it would have received as the lessor under the ground lease. That amount totaled $6,213.81 per month as of May 1990. Notwithstanding ECARG's inability to rent the Goodrich (Valley Fair) Building because of the heaving problems, the Goodrich/ECARG joint venture was still responsible to pay the mortgage relating to the construction of the Goodrich (Valley Fair) Building. ECARG was paying its own 50% share of the mortgage as well as Goodrich's 50% share of the monthly mortgage payment which totaled $12,886.03 per month.

ECARG's inability to sublease the Goodrich (Valley Fair) Building also resulted in a loss of rents ECARG would have realized under the lease agreement between Grace Retail Corporation (formerly Daylin) and Weja, Inc. pertaining to the gas station/car wash property also known as Site 157 (the Weja lease DH-744; J-44). The Weja lease provided for a monthly rental of $4,017.62 for the period October 1, 1987 through September 30, 1992. From 1992

through September 30, 1997, that lease provided for a monthly rental of $4,821.14. These rent amounts were due provided at least 70,000 square feet of the Goodrich (Valley Fair) Building was being rented.

During the period from May 1990 to September 1997, Weja, as lessee, paid less than the amount it would have been required to pay under the Weja lease had ECARG been able to sublease at least 70,000 square feet of the Goodrich (Valley Fair) Building. As a result of ECARG's not being able to sublease the building, ECARG lost rental income from Weja lease in the amount of $2,086.27 per month during the period May 1990 to September 1992; $2,889.80 per month during the period October 1992 through December 1993; and $4,821.14 per month during the period January 1994 through September 1997.

Grace's expert, Mr. McGuire, reviewed the various lease documents in connection with the calculation of ECARG's economic loss stemming from ECARG's inability to sublease the Goodrich (Valley Fair) Building from May 1990 through December 1997. Grace 1314 presents a summary of the monthly losses sustained by ECARG as a result of its inability to sublease from 1990 forward breaking that time period into specific segments to account for changes in expenses and in the amounts of lost rentals. During the period May 1990 through February 1992, the monthly loss sustained by ECARG as a result of its inability to sublease was $38,956.85.

During the period March 1992 through September 1992, the monthly loss was $26,070.82. During the period October 1992 through December 1993 the loss sustained was $26,874.35. From January 1994 through 1997, the monthly loss was $26,805.69. And finally, during the period of October 1997 through December 1997 the monthly loss sustained by ECARG as a result of its inability to sublease the Goodrich (Valley Fair) Building was $23,984.55.

Past Costs

A. Demolition: As previously stated, the Valley Fair Building had to be demolished as a result of the structural damage caused by heaving. The demolition cost the Grace Defendants $630,500. This amount has been stipulated between Grace and Honeywell.

B. Interim Remedial Measures: The Grace Defendants and Honeywell have stipulated that the Grace Defendants paid $89,750 toward the cost of the interim remedial measures at the Site installed by Honeywell.

C. Site Security: Grace and Honeywell have stipulated that Grace has spent $132,000 on security for the Site. The security costs incurred by Grace are broken down as follows: Fencework, $32,000; Guard Dogs, $87,500; Caretaker, $12,300.

D. Disposal of Chromium Contaminated Soil: Grace and Honeywell have stipulated that Grace spent $126,000 for the disposal of chromium contaminated soil in connection with the cleanup of the gas station/car wash.

E. Real Estate Taxes: The Grace Defendants and Honeywell have stipulated that the Grace Defendants have paid real estate taxes on the ECARG property in the amount of $222,900.

APPOINTMENT OF SPECIAL MASTER

Honeywell and/or its predecessor has been aware of the Site contamination for more than twenty years. During that time they have studied, tested, restudied and retested over and over the problems which are evident to all the parties involved, including the NJDEP. I am convinced beyond any doubt that unless directed otherwise by some authority, the studies and testing will continue, no remediation will occur and the dangerous condition will continue to exist. As Mr. Faranca of the DEP made clear during his testimony, Honeywell has engaged in foot-dragging and regulatory ping-pong with respect to the Site

and its ultimate cleanup. In addition, the injunctive relief this Court will grant, may require this Court to consider technical issues in the future concerning the implementation of the remedy. Pursuant to Fed.R.Civ.P. 53, I find that exceptional conditions exist and therefore I will order the appointment of a Special Master to oversee all aspects of the remediation and to ensure timely compliance with a remediation schedule.

With Court approval, the Special Master will be authorized to take whatever reasonable steps are necessary to successfully carry out his duties. He may retain the services of professionals and/or other technical people, as needed, and expend as much of his time as is required to ensure the remediation project is completed in a timely manner. The Special Master and those retained by him will receive reasonable compensation for their time and expenses, said compensation to be paid by Honeywell upon approval by the Court.

It is my intention to order Honeywell to either escrow funds or obtain a letter of credit in such an amount that will assure completion of the remediation project. It will be the Special Master's initial obligation to determine a reasonable estimate for the overall cost of the remediation project and recommend to the Court, based upon that estimate, an appropriate and fair escrow amount. General estimates were offered at trial, however I am not satisfied as to their accuracy and I therefore request further clarity on this subject.

I will retain jurisdiction of this matter until the cleanup has occurred during which time the Special Master will keep the Court and the parties apprised of all progress and problems through regular progress reports.

CONCLUSIONS OF LAW[5]

Honeywell is liable under RCRA.

Honeywell is liable for the imminent and substantial endangerment created by the chromium waste at the Site.

This action is brought pursuant to RCRA, 42 U.S.C. 6972(a)(1)(B), which provides that injunctive relief may be issued against:

> any person * * * including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.

Under RCRA, liability can be established by meeting the requirements of § 7002(a)(1)(B), 42 U.S.C. 6972(a)(1)(B). Under this statute, liability is established if Honeywell: (1) has contributed or is contributing to (2) the past or present handling, storage, treatment, transportation, or disposal of (3) any solid or hazardous waste that (4) may present an imminent and substantial endangerment to health or the environment. *Interfaith Community Org. v. Honeywell Int'l, Inc., supra,* 188 F.Supp.2d at 502 (citing 3 S. Cooke, The Law of Hazardous Waste, §§ 15.01[3][a] at 15-6 (2001)).

This Court has found that Mutual owned and operated a chromate chemical production facility adjacent to

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[5] The parties were afforded the opportunity to submit Proposed Findings of Fact and Conclusions of Law subsequent to trial. The Court has adopted certain of those Conclusions of Law and rejected others.

the Site and that it used the Site to dispose of approximately one million tons of COPR from its chromate plant. By its own admission, Honeywell is the corporate successor to Mutual and therefore it is liable for any and all acts, omissions, debts and liabilities of Mutual relating to or arising out of the chromium contamination at the Site. I conclude, therefore, that Honeywell has contributed to "the past or present handling, storage, treatment, transportation or disposal of the chromium waste at the Site." *See Interfaith Community Org. v. Honeywell Int'l, Inc., supra,* 188 F.Supp.2d at 502.

RCRA sets forth statutory definitions for the terms "solid waste" and "hazardous waste".

Section 1004(27) of RCRA, 42 U.S.C. 6903(27), defines the term "solid waste" as:

> [A]ny garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of Title 33, or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat.923).

Section 1004(5) of RCRA, 42 U.S.C. 6903(5), defines the term "hazardous waste" as:

[A] solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may--

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Honeywell has admitted that the chromium waste at the Site is both a "solid waste" and a "hazardous waste" under RCRA.

This and other courts have found that chromium, particularly hexavalent chromium, is a hazardous substance under RCRA. *See, e.g., Interfaith Community Org. v. Honeywell Int'l, Inc., supra,* 188 F.Supp.2d at 503; *United States v. Power Engineering Co.,* 10 F.Supp.2d 1145, 1157-1158 (D.Colo.1998), affirmed, 303 F.3d 1232 (10th Cir. 1999), certiorari denied, 529 U.S. 1086 (2000) (hexavalent chromium is a form of hazardous waste and of solid waste under RCRA and Colorado regulations); *Steel Manufacturers Ass'n v. EPA,* 27 F.3d 642, 645 (D.C. Cir. 1994) (electronic arc furnace dust is considered to be a form of hazardous waste by the EPA, in part, because, it contains hexavalent chromium). Under RCRA, EPA classifies waste that contains five parts per million (ppm) or more of chromium as hazardous. 40 C.F.R. 261.24.

The Court further finds that the chromium waste that Mutual disposed of at the Site is the cause of the extensive chromium contamination of soil, groundwater, surface water and sediments at and near the Site.

The final element of liability under RCRA requires a showing that the solid or hazardous waste at issue may present an imminent and substantial endangerment to health or the environment.

This Court has found that "compliance (or non-compliance) with federal or state environmental standards is a determinative factor in assessing whether a particular form of contamination presents the possibility of imminent or

substantial endangerment." *Interfaith Community Org. v. Honeywell Int'l, Inc., supra,* 188 F.Supp.2d at 503.

RCRA was "designed to provide a remedy that ameliorates present or obviates the risk of future 'imminent' harms * * *." *Meghrig v. KFC Western, Inc.*, 516 U.S. 479, 486 (1996). "An imminent and substantial endangerment exists if there is 'reasonable cause for concern that someone or something may be exposed to a risk of harm if remedial action is not taken.'" *ICO v. Shinn,* D.N.J. Civ. No. 93-4774(JCL), *slip op.*, November 24, 1998, p. 15.

This Court concludes that Plaintiffs need not show actual harm to health or the environment. It is enough to show that such an endangerment *may* exist. *Interfaith Community Org. v. Honeywell Int'l, Inc., supra,* 188 F.Supp.2d at 503 (citing 3 S. Cooke, The Law of Hazardous Waste, §§ 15.01[3][e] at 15-11 n. 45-47 (2001)). *See also Meghrig v. KFC Western, Inc., supra,* 516 U.S. at 486 (imminence "implies that there must be a threat which is present now, although the impact of the threat may not be felt until later"); *Dague v. City of Burlington,* 935 F.2d 1343, 1355-1356 (2d Cir. 1991), reversed on other grounds, 505 U.S. 557 (1992); *Price v. United States Navy,* 39 F.3d 1011, 1019 (9th Cir. 1994); *United States v. Conservation Chemical Co.*, 619 F.Supp. 162, 193 (W.D.Mo. 1985).

This Court has found that Plaintiffs have shown actual harm to health and the environment.

An "endangerment" is present if there is merely threatened or potential harm. *Interfaith Community Org. v. Honeywell Int'l, Inc., supra* 188 F.Supp.2d at 503; *Dague v. City of Burlington, supra,* 935 F.2d at 1356. Only the risk of harm, rather than actual harm, must be imminent. *Interfaith Community Org. v. Honeywell Int'l, Inc., supra* 188 F.Supp.2d at 503. In *Price v. United States Navy, supra,* 39 F.3d at 1019, the Ninth Circuit stated:

> A finding of "imminency" does not require a showing that actual harm will occur immediately so long as the risk of threatened harm is present: "An 'imminent hazard' may be declared at any point in a chain of events which may ultimately result in harm to the public." Imminence refers "to the nature of the threat rather than identification of the time when the endangerment initially arose."

In applying the "imminent and substantial endangerment" standard, courts should err in favor of protecting human health or the environment. In *United States v. Conservation Chem. Co., supra,* 619 F.Supp. at 194, the court stated:

> [I]f an error is to be made in applying the [imminent and substantial] endangerment standard, the error must be made in favor of protecting public health, welfare and the environment. Thus, just as the word "endangerment" does not require quantitative proof of actual harm, the word "substantial" does not require quantification of the endangerment (*e.g.*, proof that a certain number of persons will be exposed, that "excess deaths" will occur, or that a water supply will be contaminated to a specific degree).

In *United States v. Price,* 688 F.2d 204, 214 (3d Cir. 1982), the Third Circuit stated that the "imminent and substantial endangerment" standard was enacted to "invoke * * * the full equity powers of the federal courts in the effort to protect public health, [and] the environment * * * from the pernicious effects of toxic wastes." The Court found that RCRA allowed courts to take action when there was only a risk of harm, a more lenient standard than the traditional requirement of threatened irreparable harm *Id.* at 213-214.

RCRA is not only concerned with threats to human health. Suit may also be brought where there may be "an imminent and substantial endangerment to * * * the environment." 42 U.S.C. 6972(a)(1)(B); *PMC, Inc. v. Sherwin-Williams Co.*, 151 F.3d 610, 618 (7th Cir. 1998) (imminent and substantial danger where toxic wastes were buried and posed a "constant danger to the groundwater * * *"); *Aiello v. Town of Brookhaven*, 136 F.Supp.2d 81, 115 (E.D.N.Y. 2001) (imminent and substantial endangerment under RCRA based on harm to environment, even though plaintiffs conceded no harm to human health); *Raymond K. Hoxsie Real Estate Trust v. Exxon Educ. Found.*, 81 F.Supp.2d 359, 367 (D.R.I. 2000) (liability under RCRA may be based solely on contamination of groundwater and/or soil at the site in levels "exceeding state standards" because "the statute clearly speaks of endangerment to the 'environment'"); *Lincoln Properties, Ltd. v. Higgins*, 1993 WL 217429, *13 (threat to "living organism" need not occur for finding of imminent and substantial endangerment to the environment. "Neither the statute nor the case law interposes an additional requirement that humans or other life forms be threatened." Harm to water, air, or soil alone constitutes "imminent and substantial endangerment.")

In *ICO v. Shinn*, this Court set forth the showing that is needed for an imminent and substantial endangerment under RCRA. It held that a site "may present an imminent and substantial endangerment" within the meaning of RCRA where: (1) there is a potential population at risk; (2) the contaminant at issue is a RCRA "solid" or "hazardous waste"; (3) the contaminant is present at levels above that considered acceptable by the state; and (4) there is a pathway for current and/or future exposure. *ICO v. Shinn, supra*, slip op. pp. 15-16. *See also Foster v. United States*, 922 F.Supp. 642, 661 (D.D.C. 1996)

This Court has found that the State of New Jersey has determined that the Site presents a "risk of imminent danger to public health and safety and imminent and severe damage to the environment." This determination by the State is entitled to considerable weight by this Court.

Sampling Data Shows that Chromium Contamination at the Site Substantially Exceeds Acceptable State Standards

New Jersey Law. In New Jersey, environmental contamination is deemed "acceptable by the State" if the level of contamination does not exceed the clean-up levels established by the State under the Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-1, *et seq.* (hereafter "the Remediation Act"). *ICO v. Shinn, supra,* slip op., pp. 17-18.

In the Remediation Act, New Jersey found that strict remediation standards are necessary to protect the public and the environment from the risks posed by hazardous substances. N.J.S.A. 58:10B-1.2. Accordingly, NJDEP was charged with adopting minimum remediation standards. N.J.S.A. 58:10B-12(a). Such standards are adopted through rulemaking or on a case-by-case basis until the rulemaking occurs. *Ibid.* Under either alternative, the minimum remediation standards for soil must ensure that, for human carcinogens, the cancer risk is no greater than 1 in 1 million and that, for noncarcinogens, the Hazard Index is no greater than 1. N.J.S.A. 58:10B-12(d).

New Jersey law requires that minimum remediation standards be established for residential and non-residential future uses of the property. *e.g.,* N.J.S.A. 58:10B-12(c). Residential use is the preferred future use of all property subject to remediation. N.J.S.A. 58:10B-12(g). *See also* N.J.S.A. 58:10B-13(b). Non-residential use may only be used if the property owner consents to a deed restriction and

agrees to maintain any remediation controls[6] that are imposed in lieu of a full clean up of the property to the established remediation standard. N.J.S.A. 58:10B-13(a)-(d). Residential standards are to be set at a level that allows unrestricted use of the property without the use of remediation controls. N.J.S.A. 58:10B-12(c).

Under the Remediation Act, any party charged with remediating a site may propose to NJDEP that alternative minimum soil remediation standards (hereafter "ARS") be used in lieu of standards set by NJDEP. N.J.S.A. 58:10B-12(f)(1). NJDEP may only agree to the use of an ARS if it is demonstrated that the ARS protects health to the same degree as NJDEP's standards. *Ibid.* In other words, an ARS soil standard may not be used in lieu of the NJDEP standard unless it is demonstrated that the standard ensures that, for human carcinogens, the cancer risk is no greater than 1 in 1 million and that, for noncarcinogens, the Hazard Index is no greater than 1. N.J.S.A. 58:10B-12(f)(1). A different ARS may be used for each potential exposure pathway.

Here, NJDEP has set remediation or clean-up standards for the Site for chromium for soils, groundwater, and surface water. It has also set screening guidelines and a remediation action goal for sediment contamination in the Hackensack River. Those standards are addressed below. This Court concludes that although contamination at levels above that of a single standard would be sufficient to show an imminent and substantial endangerment, here all the applicable NJDEP standards are exceeded. This site is so contaminated and the contamination is so mobile that the standards for all media--soil, groundwater, surface water and sediments--are exceeded. Even the ARS's that Honeywell

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[6] Remediation controls refer to institutional controls or engineering controls. Institutional controls limit human activity in the vicinity of the contamination. N.J.S.A. 58:10B-1. Engineering controls utilize an engineered mechanism to contain the contamination, such as caps, covers, signs and fences. *Ibid.*

itself has proposed for dermal contact with soil are exceeded. Since the acceptable state standards are exceeded, the first part of the test for an imminent and substantial endangerment is satisfied.

Hexavalent Chromium in Soils at the Site. This Court concludes that all applicable state standards for hexavalent chromium in soil (20 ppm, 240 ppm, 270 ppm, and 6,100 ppm) are far exceeded by the content of hexavalent chromium in the soil at the Site.

Total and Hexavalent Chromium in Groundwater at the Site. This Court concludes that the applicable state standard for total chromium in groundwater (100 ppb) is far exceeded by the content of chromium in the groundwater at the Site.

This Court concludes that the applicable State standard for hexavalent chromium in groundwater which seeps to the surface and is discharged to the Hackensack River (50 ppb) is far exceeded by the content of hexavalent chromium in the groundwater at the Site.

Hexavalent Chromium in Surface Water at the Site. This Court concludes that the applicable state standard for hexavalent chromium in surface water (50 ppb) is far exceeded by the content of hexavalent chromium in the swales at the Site which discharge to the Hackensack River.

This Court concludes that the applicable state standard for hexavalent chromium in surface water which applies as a minimum elicitation threshold (MET) for allergic contact dermatitis (ACD)(25 ppm) has been exceeded or approached by the surface water on the Site.

Total Chromium in Sediments in the Hackensack River Adjacent to the Site. This Court concludes that the applicable state sediment screening values for total chromium in sediments, Effects Range-Low (ER-L) (80 ppm) and Effects Range-Median (ER-M) (370 ppm), are far exceeded by the content of chromium in the sediments of the Hackensack River adjacent to the Site.

This Court concludes that discharges from the Site have caused the applicable state sediment screening values for total chromium in sediments in the Hackensack River to be exceeded.

Hexavalent Chromium in the Waters of the Hackensack River Downstream from the Site. This Court concludes that Honeywell has measured hexavalent chromium in the Hackensack River, close to and downstream from the Site, at levels which EPA has found to be chronically toxic to saltwater vertebrates and invertebrates.

Chromium At The Site Is Hazardous To Humans And The Environment Through Current And Future Pathways

This Court concludes that there are current and future pathways for the excessively high chromium both at the Site and emanating from the Site to reach humans and the environment, thus putting humans and the environment at risk.

This Court concludes that hexavalent chromium is a known human carcinogen and that the seriousness of the potential harm caused to human health by exposure to hexavalent chromium is well-documented and not open to dispute.

This Court concludes that hexavalent chromium is toxic to nearly every environmental receptor and that both chromium and hexavalent chromium cause serious harm to the environment.

Current And Future Pathways Exist For Exposure Of Humans And The Environment To Unacceptable Levels Of Chromium

This Court concludes that there is a substantial risk that trespassers, construction and utility workers, future commercial workers, future residents and other persons may

come in contact with the high levels of chromium contamination at the Site.

This Court concludes that the groundwater at the Site and the Hackensack River immediately adjacent to the Site are receptors of chromium contamination from the Site.

This Court concludes that local fish populations, wildlife and communities of lower trophic organisms, which comprise the base prey that supports higher trophic levels are all potential receptors of chromium contamination.

This Court concludes that Honeywell has not raised any valid defense to liability under RCRA.

The Interim Remedial Measures Are Not Sufficient to Abate the Imminent and Substantial Endangerment at the Site

In 1989-1990, NJDEP required Honeywell to install an interim cap over approximately 17 acres of the Site. The interim cap consists of 30-mil PVC liner, a geotextile cover, and a 3/4" layer of sharp-edged crushed stone cover. Other portions of the Site are covered with asphalt or concrete slabs. The interim cap, the concrete, and the asphalt cover are collectively referred to as the Interim Remedial Measures or IRMs.

Honeywell argues that the current IRMs eliminate any potential endangerment to humans or the environment. Defendant Honeywell International, Inc.'s Trial Brief, November 14, 2002 (hereafter, "Honeywell Trial Brief"), p. 5; *see also Interfaith Community Org. v. Honeywell Int'l, Inc., supra,* 188 F.Supp.2d at 504.

This Court concludes that the current IRMs do not eliminate the imminent and substantial endangerment to health and the environment posed by the chromium contamination at the Site.

This Court concludes that Honeywell, contrary to its present argument, specifically informed NJDEP, at the time it began installation of the IRMs, that the IRMs could not

prevent all discharges of chromium contamination from the Site.

This Court concludes that NJDEP has rejected Honeywell's risk assessment for the Site, in part, because the assessment did not adequately consider risk by failing to assume that no IRMs exist at the Site.

Based on the Grace defendants' insistence on a residential cleanup for the Site, risks must be assessed without the IRMs because New Jersey law prohibits the use of engineering controls, such as physical barriers like the cap, with residential use.

This Court concludes that the IRMs are severely compromised. The interim cap has been in place well beyond its useful life and is ripped and leaking. The asphalt which covers other portions of the Site is cracked and heaving.

Honeywell contends that human health risks due to future exposure to the COPR "cannot be based on an unrealistic and implausible assumption that, despite knowledge of the presence of COPR at Study Area 7, utility or construction workers would excavate into the soil without any protective equipment." Honeywell Trial Brief, p. 6. However, to prevail on a claim of imminent and substantial endangerment under RCRA, plaintiffs "need not establish an incontrovertible harm to health and the environment. The operative word is 'may'" (citations omitted) *Hudson Riverkeeper Fund, Inc. v. Atl. Richfield Co.,* 138 F.Supp.2d 482, 488 (S.D.N.Y. 2001). Thus, plaintiffs need only show, as they have done, that there is a risk that utility or construction workers may be exposed to COPR in the future.

Honeywell cites *Price v. United States Navy, supra,* 39 F.3d at 1019, for the proposition that there is "no imminent and substantial endangerment where contamination remained on site" where there are cap, asphalt and cement barriers in place. Honeywell Trial Brief, pp. 4-5.

This Court concludes that *Price v. United States Navy,* is readily distinguished from this case.

In *Price v. United States Navy,* the Ninth Circuit held that there was no imminent and substantial endangerment where: (1) "there was no threat of migration of contaminants through ground or surface water or air"; (2) "tests revealed no significant contamination beneath the foundation"; (3) the "[s]tate certified that all appropriate response actions had been completed and that no further removal/remedial action [was] necessary"; and (4) "repairs and/or renovation might not cause a release of contaminants." 39 F.3d at 1019-20. These facts do not exist here.

This Court concludes that, unlike in *Price,* despite the IRMs, contaminants are migrating into the environment.

This Court concludes that, unlike in *Price,* despite the IRMs, there are extremely high levels of contamination beneath the interim cap.

This Court concludes that, unlike in *Price,* the State has taken the position that further remedial action is necessary at the Site. Moreover, even Honeywell admits that there must be further remediation at the Site.

Unlike the cement barrier in *Price,* which was the foundation of a house, the IRM barriers here include a damaged PVC liner over 17 acres of the Site which is years beyond its useful life and concrete and asphalt which is cracked and heaved.

This Court concludes that, unlike the cement barrier in *Price,* the integrity of the barriers at the Site will continue to be compromised due to heaving. Since the chromium waste at the Site is known to cause or create conditions that cause pavements to heave and to penetrate foundations of buildings, barriers that might have blocked the pathway in other situations are not acceptable barriers for the chromium waste at the Site.

The State Surface Water Standards Apply To The Discharges As They Leave The Site

This Court concludes that, as a matter of law, the New Jersey surface water standard applies to discharges from the Site as they enter the Hackensack River.

Honeywell argues that no finding of an imminent and substantial endangerment can be based on exceedances of the 50 ppb hexavalent chromium standard because that standard applies, not to the discharge at the end-of-the-swale, but to the discharge after it has been diluted in the Hackensack River outside of an area that is referred to as the mixing zone. Honeywell Trial Brief, pp. 5- 6.

This Court concludes that the mixing zone regulations do not apply to Honeywell's discharges from the Site.

A mixing zone is a localized area in the water body designated by NJDEP for mixing, dispersing, or dissipating discharges into the water body. N.J.A.C. 7:9B-1.4. Water quality within a mixing zone may exceed promulgated criteria, but nuisances, hazardous conditions, and acute mortality to aquatic organisms is not allowed within the mixing zone. *Ibid.* A party must apply for a mixing zone and obtain the State's approval to obtain one for a site. Honeywell has not requested a mixing zone and NJDEP has not approved one.

Where no mixing zone applies, the water quality criteria, such as the 50 ppb standard, "apply throughout the waterbody including at the end of any discharge pipe, canal or other discharge point" [*e.g.*, the swales]. 40 C.F.R. 131.36(c)(2)(i).

This Court concludes that NJDEP has applied the 50 ppb standard to hexavalent chromium discharges from the swales.

This Court concludes that, by Honeywell's own expert's admission, discharge from the Site causes the 50

ppb standard for hexavalent chromium to be exceeded in the Hackensack River close to the Site.

Honeywell's Arguments As To Groundwater Contamination Are Without Merit

This Court concludes that, as a matter of law, the New Jersey groundwater standard applies to the groundwater beneath the Site.

Honeywell argues that since no one is drinking the groundwater beneath the Site, contamination from the groundwater at the Site does not present a risk to human health. Honeywell Trial Brief, p. 5.

This Court concludes that contaminated groundwater seeps to the surface of the Site, presenting a risk of allergic contact dermatitis to trespassers, utility and construction workers, future commercial workers, future residents, and others who come on the Site.

This Court concludes that Honeywell's failure to delineate the deep groundwater may pose a potential risk to human health since human ingestion of contaminated groundwater from the Site is possible.

Under New Jersey law, groundwater is an environmental receptor in its own right. N.J.A.C. 7:26:E-1.8.

An "imminent and substantial endangerment" exists when buried hazardous waste poses a "constant danger to the groundwater * * *." *PMC, Inc. v. Sherwin-Williams Co., supra,* 151 F.3d at 618. "The water's designation as non-potable is not fatal. The statute clearly speaks of endangerment to the 'environment.' Groundwater, potable or not, and soil are a part of the environment." *Raymond K. Hoxsie Real Estate Trust v. Exxon, supra,* 81 F.Supp.2d at 367. In *Lincoln Properties, Ltd. v. Higgins,* 1993 WL 217429, * 13, the court stated:

> RCRA does not define the term "environment." However, it presumably encompasses the air, soil and water, including groundwater. In this case, the environment has already been degraded significantly by the contaminants' invasion of the water table. The groundwater * * * now contains [pollutants] in concentrations far exceeding federal and state standards.

Honeywell argues that "no ecological receptors are exposed to the groundwater except where it discharges to surface water." Honeywell Summary Judgment Opp. Br., July 10, 2001, p. 3.

The Court concludes that the "exception" noted by Honeywell undermines its argument. Honeywell's "exception" is significant since surface water is a major pathway of exposure at the Site. This Court has concluded that contaminated groundwater discharges to the Hackensack River where fish, wildlife, and benthic organisms are exposed to the contamination. Contaminated groundwater also forms on-site seeps where it exposes human and ecological receptors.

Honeywell contends that New Jersey's Groundwater Quality standard of 100 ppb for chromium in groundwater is not applicable at the Site, based on *Federal Pacific Electric Co. v. NJDEP*, 334 N.J.Super. 323 (2000). Honeywell Trial Brief, p. 5, note 10.

To the extent that Honeywell still presses this argument, this Court finds the argument to be without merit.

First, this Court concludes that Honeywell has likely abandoned this argument, since it informed NJDEP in June 2002 that it would remedy groundwater discharges from the Site that exceed the 100 ppb standard.

Second, the facts here are entirely different than those in *Federal Pacific*. While the 100 g/l has not been promulgated as a remediation standard under the Remediation Act, NJDEP has stated that it is one of the

standards that applies to this Site after years of reviewing the conditions at the Site and considering the impact of this contamination.

Since NJDEP may establish standards on a case-by-case basis under the Remediation Act (N.J.S.A.58:10B-12(a)), this standard is fully applicable. In fact, Honeywell adopted this standard in its own site-specific RI to evaluate groundwater at the Site.

Moreover, Honeywell could have, but did not, propose a different site-specific groundwater standard which NJDEP would have evaluated, and possibly selected, as the case-by-case standard for the Site. The plaintiff in *Federal Pacific* sought review of the dispute between itself and NJDEP as to what standard would be applied to the Site where NJDEP had not promulgated a standard through formal rulemaking. 334 N.J.Super. at 327. By failing to make such a proposal to NJDEP, Honeywell has waived its right to seek any alternative to the selected standard.

RCRA § 7002(e) provides that a court, "[i]n issuing any final order in an action brought pursuant to [§ 7002] ... may award costs of litigation (including reasonable attorney and expert witness fees) to the prevailing or substantially prevailing party, whenever the court determines such an award is appropriate." 42 U.S.C. § 6972(e). Having concluded that Plaintiffs have prevailed on their claim against Honeywell under RCRA § 7002(a)(1)(B), and finding that the award of costs is appropriate, the Court hereby orders Honeywell to pay Plaintiffs' all reasonable attorneys fees, expert witness fees and other costs Plaintiffs have incurred in furtherance of its RCRA claim against Honeywell in this action.

A petition setting forth all costs (including attorneys fees and expert witness fees) being claimed by Plaintiffs under 42 U.S.C. § 6972(e) shall be submitted to the Court within sixty (60) days from the date of entry of the Order issued herewith

THE GRACE DEFENDANTS ARE NOT LIABLE UNDER RCRA

Plaintiffs assert claims against the Grace Defendants under RCRA § 7002(a)(1)(B), 42 U.S.C. § 6972(a)(1)(B). Having found that none of the Grace Defendants ever engaged in the disposal or other relevant activity related to the approximately one million tons of COPR that Mutual disposed at the ECARG Property, the Court finds that there is no basis for imposing RCRA liability on the Grace Defendants in this action. Thus, the Court will enter judgment in favor of the Grace Defendants on Plaintiffs' and Honeywell's RCRA claims. The basis for the Court's ruling is set forth below.[7]

The Plain Language Of Rcra Makes Clear That Liability Should Only Be Imposed On Those Who Actively Manage Or Dispose Solid Or Hazardous Waste

The Supreme Court of the United States has instructed that the intent of Congress is to be determined by the plain language of a statute and, absent an indication from Congress to the contrary, words in a statute are to be given

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[7] In a previous ruling, this Court, in reliance upon *United States v. Price*, 523 F. Supp. 1055 (D.N.J. 1981) *aff'd. on other grounds* 688 F.2d 204 (3d Cir. 1982), held that co-defendant Roned Realty could be held liable under RCRA § 7002(a)(1)(B) based solely on its alleged "passive indifference" as a property owner. *See* June 13, 2002 Decision at 9-11. Upon further consideration, the Court concludes that its prior ruling is not in accordance with the plain language of RCRA, controlling Third Circuit precedent, and all other post-*Price* federal court decisions that have addressed the liability of land owners under RCRA. The Court would also note that the Third Circuit's opinion in *Price* affirmed the District Court's decision in *Price* on grounds not relevant to the issues involved in this case. The Third Circuit only addressed he District Court's denial of the United States' motion for a preliminary injunction, and not the District Court's denial of the defendant's summary judgment motion on the issue of RCRA liability. 688 F.2d at 211.

their "ordinary contemporary, common meaning." *Williams v. Taylor*, 120 S.Ct. 1479 (2000).

The Court finds that a straightforward reading of RCRA compels a finding that only *active* human involvement with the waste is subject to liability under RCRA § 7002(a)(1)(B). In this regard, RCRA § 7002(a)(1)(B) provides that liability may attach only if a person "*has contributed or is contributing* to the handling, storage,[8] treatment, transportation or disposal of a solid or hazardous waste that may pose an imminent or substantial endangerment to human health or the environment." 42 U.S.C. § 6972(a)(1)(B) (emphasis added). The ordinary meaning of "contribute" is "to act as a determining factor." *Webster's II New Riverside University Dictionary* (1998). Thus, Congress intended to impose liability only where a person is shown to have affirmatively acted as a determining factor over the waste management activities listed in RCRA § 7002(a)(1)(B). No other reading is possible as the phrase "has contributed or is contributing to" in § 7002(a)(1)(B) modifies the specified waste management activities of "handling," "treatment," "transportation," "storage" and "disposal" in that provision.

The legislative history also supports the conclusion that Congress intended that RCRA § 7002(a)(1)(B) reach only persons engaged in the active management of waste. In this regard, Congress stated:

> The amendment reflects the long-standing view that generators and other persons *involved* in the handling ... disposal of hazardous wastes must share in the responsibility for the abatement of the hazards arising from *their activities.*

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[8] RCRA defines "storage" to mean the temporary placement of waste; this definition is mutually exclusive of the term "disposal." *See* 42 U.S.C. § 6903(33). *See* 42 U.S.C. § 6903(33).

H.R. Conf. Rep. No. 98-1133, at 119 (1984) (emphasis added).

All Federal Court Decisions Except *Price* Have Held That Active Involvement With a Waste Is a Prima Facie Element Of Liability Under RCRA § 7002(a)(1)(B)

The Second Circuit in *ABB Industrial Systems, Inc. v. Prime Technology, Inc. et al.*, 120 F.3d 351, 359 (2d Cir. 1997), is the only Circuit Court to have considered the issue of whether a property owner may be held liable under RCRA for alleged indifference or failure to remediate pre-existing contamination. In that case, plaintiff ABB purchased a property from defendant Zero-Max in 1985. Subsequently, in 1989, ABB discovered that the property was contaminated. ABB then sued Zero Max and other predecessors-in-title under RCRA § 7002(a)(1)(B) to compel a cleanup. No evidence was adduced that Zero-Max spilled, handled or disposed of the waste during its ownership. However, ABB did contend that the prior contamination continued to spread during Zero-Max's ownership, and that Zero-Max did nothing to stop the spreading of such contamination during its period of ownership. The Second Circuit affirmed the dismissal of the RCRA § 7002(a)(1)(B) claim against Zero Max "because ABB cannot show that Zero Max spilled hazardous chemicals or otherwise contaminated the site ..." 120 F.3d at 359.

Three post-*Price* district court decisions have similarly held that a property owner's "studied indifference" is insufficient to impose RCRA liability. These courts have all ruled that RCRA's plain language requires proof of active human involvement in the past or present "handling, storage ... disposal" of a waste. *See Delaney v. Town of Carmel*, 55 F.Supp.2d 237, 255-257 (S.D.N.Y. 1999)(holding that defendant Layhill, who purchased property 15 years after disposal ceased and who did not

contain the waste after learning of the problem, was not liable under RCRA); *Marriott Corporation v. Simkins Industries, Inc.*, 929 F.Supp. 396, 398 fn. 2 (S.D.Fla. 1996) (dismissing RCRA claim against Marriott on basis that a "delay in taking remedial action upon discovery of contamination caused by a previous owner does not constitute wrongful handling or storage of hazardous waste"); *First San Diego Properties v. Exxon,* 859 F.Supp. 1313 (S.D.Cal. 1994) (expressly rejecting *Price* and dismissing RCRA claim brought by waste generator, Exxon, against plaintiff property owner who purchased the property years after Exxon contaminated groundwater; Exxon alleged plaintiff had exacerbated the environmental conditions by plaintiff's "indifference" in not investigating or cleaning up the property after it had discovered the contamination.).

The Third Circuit Has Rejected *Price's* Fundamental Premise By Ruling That "Disposal" Under RCRA Does Not Include Passive Migration of Contaminants

In reaching its conclusion that liability could be imposed under RCRA for mere "studied indifference" towards contamination, the *Price* court focused on RCRA's definition of "disposal" and concluded that it encompassed the migration of contaminants from previously dumped waste. Because the RCRA definition of disposal includes the term "leaking,"[9] the *Price* court reasoned that "[t]he gravamen of a section 7003 action ... is not defendants' dumping which admittedly ceased ... in 1972, but the present imminent hazard posed by the *continuing disposal (leaking) of contaminants into the groundwater.*" *Price,* 523 F.Supp. at 1071 (emphasis supplied). From there, the Court reasoned that a property owner's "studied indifference" with regard to

[9] 42 U.S.C. § 6903(3).

the migrating contaminants constituted "contributing to ... disposal" of a waste.

The Third Circuit, in *United States v. CDMG Realty Co. et al.,* 96 F.3d 706 (3d Cir. 1996), specifically rejected the legal underpinning of *Price, i.e.,* that the RCRA "disposal"[10] definition includes migration of contaminants from previously dumped waste. In the *CDMG* case, the defendant (Dowel) purchased a New Jersey landfill almost ten years after waste dumping had ceased, having full knowledge before the purchase that waste materials were at the site. Dowel did not dump any new waste at the property. However, previously dumped waste was alleged to be leaching to the groundwater and migrating at and from the landfill. Dowell moved for summary judgment arguing that "disposal" required active involvement in the waste dumping. The Third Circuit agreed, holding "that the passive migration of contamination dumped in the land prior to Dowel's ownership does not constitute disposal." *CDMG,* 96 F.3d. at 711. In so holding, the Third Circuit cited as "unpersuasive" *Price's* holding that "disposal" encompasses the passive migration of contaminants. 96 F.3d at 713. The court ruled that the term "leaking" does not denote "the gradual spreading of contamination alleged here." *Id.* The court found as a strong argument that "in the context of the definition [of disposal] 'leaking' and 'spilling' should be read to require affirmative human action." *Id.*

Accordingly, the Court concludes that RCRA liability may be imposed on the Grace Defendants in this case only upon a showing that they actively engaged in the management or disposal of COPR at the Site, and not upon evidence that they merely displayed alleged "studied indifference" to pre-existing chromium contamination

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[10] Although CMDG addressed CERCLA liability, the Court was interpreting the RCRA definition of "disposal," which is incorporated by reference into CERCLA. *See* 42 U.S.C. § 9601(29).

resulting from Mutual's COPR disposal activities. *CDMG*, 96 F.3d at 711-713; *ABB Industrial Systems, Inc.*, 120 F.3d. at 359; *Delaney*, 55 F.Supp.2d at 255-257; *Marriott Corporation*, 929 F.Supp. at 398 fn. 2; *First San Diego Properties*, 859 F.Supp. 1313.

The Grace Defendants Have Not Disposed Of Any COPR At The Site

This Court has already found that neither W.R. Grace & Co. nor W.R. Grace Ltd. have ever owned, operated or taken any action regarding the ECARG Property specifically related to pollution or environmental compliance. *See ICO v. Honeywell International, Inc.*, 215 F.Supp.2d 482, 498-502 (D.N.J. 2002). Similarly, there is no evidence that ECARG ever disposed of any COPR at the ECARG Property. Accordingly, the Court finds no basis on which to hold the Grace Defendants liable under RCRA § 7002(a)(1)(B), and therefore will enter judgment in favor of Grace on Plaintiffs' and Honeywell's RCRA claims.

The Removal Of Abandoned Drums And Alleged Handling And Disposal Of Petroleum Do Not Provide Any Basis For Imposing RCRA Liability On The Grace Defendants

The Court specifically rejects Plaintiffs' and Honeywell's argument that the removal of abandoned drums left at the ECARG Property by "midnight dumpers" or the alleged handling and/or disposal of petroleum[11] provide a

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[11] In Plaintiffs' proposed Finding of Fact, Plaintiffs state: "W.R. Grace & Co. arranged for the backfilling of excavated chromium contaminated soils onto Site 157. Memorandum from Ingram, W.R. Grace & Co., Pl. Ex. 686, p. 2. W.R. Grace & Co. therefore handled hazardous wastes at the Site." This proposed Finding of Fact is rejected. P-686 is a memo requesting additional funding for costs relating to the removal of the underground storage tanks ("USTs") at the gas station/car wash property (Site 157). P-686 does not contain any evidence that

basis for imposing RCRA liability on the Grace Defendants in this action. No evidence has been presented to the Court demonstrating that these activities have caused or contributed in any way whatsoever to the "imminent and substantial endangerment to health or the environment" posed by the roughly one million tons chromium waste that Honeywell's predecessor, Mutual, disposed of at the Site. The term "which" in the statutory phrase "*which* may present an imminent and substantial endangerment to health or the environment" in RCRA § 7002(a)(1)(B) requires Plaintiffs' and Honeywell to establish that the drum removal and/or petroleum release presented the "imminent and substantial endangerment." No such showing was made. This case is concerned with chromium contamination--not petroleum contamination. *See, e.g., Maine People's Alliance, et al. v. Holtrachem,* 211 F.Supp.2d 237, 255 (D.Me. 2002) (holding that in a RCRA citizen's suit there must be a causal link between the disposal of a particular contaminant and the "imminent and substantial endangerment" complained of.); *Hudson Riverkeeper Fund, Inc. v. Atlantic Richfield Company,* 138 F.Supp.2d 482, 487-88 (S.D.N.Y. 2001) (requiring proof that defendant disposed PCBs at site because PCBs were alleged to be causing an "imminent and substantial endangerment").

Accordingly, having been presented with no evidence linking drum removal or alleged petroleum handling/disposal activities to the "imminent and substantial endangerment"

"W R. Grace arranged for the backfilling of excavated chromium contaminated soils onto Site 157." To the contrary, P-686 confirms that in connection with the NJDEP-approved UST removal, 1,040 tons of BTEX/chromium contaminated soil was removed and disposed of offsite (P-686, p. 1) and that the excavation was then backfilled (P-686, p. 2). As further evidence of the fact that the excavated soil was removed and disposed of offsite, Honeywell and the Grace Defendants have stipulated that the incremental increase in the offsite disposal cost as a result of the presence of chromium in the soil was $126,000. *See* Amended Past Costs Stipulation, filed March 14, 2003, ¶ 4.

posed by chromium at the Site, the Court concludes that these activities provide no basis for imposing RCRA liability on any of the Grace Defendants.

Although Roned chose to absent themselves from the trial as a result of their settlement with Honeywell, claims against them by Plaintiffs persist. For the same reasoning the Court finds no RCRA liability against the Grace Defendants, it finds no RCRA liability against Roned.

GRACE DEFENDANT'S THIRD AMENDED CROSSCLAIMS vs. HONEYWELL AND HONEYWELL'S CLAIMS vs. GRACE

1. Honeywell Is Liable Under RCRA

In Count I of its Third Amended Cross-Claims, ECARG asserts a claim against Honeywell pursuant to Section 7002(a)(1)(B) of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6972(a)(1)(B). Section 7002(a)(1)(B) provides, in pertinent part, that injunctive relief may be issued against "any person ... who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." 42 U.S.C. § 6972(a)(1)(B).

The Court has already analyzed Honeywell's liability under RCRA and therefore concludes as a matter of law that Honeywell is liable to ECARG under RCRA.

Having concluded that all three elements of Honeywell's liability under RCRA § 7002(a)(1)(B) are established, the Court finds that Honeywell is liable to ECARG under Count One of its Third Amended Crossclaims for the injunctive relief, attorneys' fees and costs.

As stated previously, a mandatory injunction will issue directing excavation and removal of COPR as the only effective remedy that will address the health and

environmental risks as well as the heaving problem at the ECARG property. Upon removal of the COPR, Honeywell must completely backfill the entire ECARG property with clean fill. Since I have already concluded that the sediments in the Hackensack River in the vicinity of the ECARG property are contaminated with chromium at levels exceeding NJDEP's (ER-L) and ER-M toxicity levels, it will be necessary that Honeywell remedy all Hackensack River sediments that have been contaminated with chromium from the Site. I also conclude that chromium contaminated groundwater from Study Area 5 (the location of the former Mutual plant) located to the east of the ECARG property flows in the direction of the ECARG property, and therefore there is a substantial likelihood that the property could become recontaminated with hexavalent chromium after the COPR is removed. Accordingly, I conclude that as an additional remedy, Honeywell must implement hydraulic controls on the eastern perimeter of the ECARG property so as to prevent recontamination of the Site from Study Area 5.

As provided in the Order issued herewith, the parties shall meet with the Special Master, within thirty days of his appointment, and arrive at a Work Plan. The Work Plan shall contain a time table and benchmark dates for the excavation, removal, treatment and offsite disposal of all COPR on the Site, and the backfilling of the Site with clean soil in order that the 240 ppm hexavalent chromium residential soil cleanup level is attained throughout the Site.

The Court concludes that sediments in the Hackensack River located in the vicinity of the ECARG Property are highly contaminated with chromium at levels greatly exceeding NJDEP's "ER-L" and "ER-M" toxicity screening levels, that the approximately one million tons of COPR that Mutual disposed at the ECARG Property is the source of such sediment contamination, that the contaminated sediments are, and will continue to be, highly toxic to fish, plankton, barnacles, mussels, crabs, clams,

crustaceans, worms and/or other organisms living in and around them, and therefore that these contaminated sediments "may present an imminent and substantial endangerment to ... the environment." 42 U.S.C. § 6972(a)(1)(B).

On the basis of these findings, the Court concludes that, in order to remedy the serious, on-going environmental risks posed by the chromium contaminated river sediments, it is necessary for Honeywell to remedy all Hackensack River sediments that have been contaminated with chromium from the Site at levels at or exceeding 370 ppm, which is NJDEP's ER-M toxicity screening level. *See ICO v. Schinn, supra,* at 15-16. The Court finds that no remedy other than that set forth above will be effective in abating the endangerment to the environment posed by the contaminated sediments.

As provided in the Order issued herewith, the parties shall meet with the Special Master, within thirty days of his appointment, and arrive at a Work Plan, with a time table and benchmark dates to remedy all Hackensack River sediments that have emanated from the Site such that the chromium ER-M of 370 ppm is attained in the Hackensack River for such chromium contaminated sediments.

The Court concludes that chromium-contaminated groundwater from Study Area 5 (the location of the former Mutual Jersey City Chrome Plant) located to the east of the ECARG Property flows in the direction of the ECARG Property, and thus that there is substantial likelihood that the ECARG Property could become re-contaminated with hexavalent chromium after the COPR is excavated and replaced with clean fill by Honeywell. As set forth in above, re-contamination of the ECARG Property with hexavalent chromium would present health risks to humans, including future construction workers, future utility workers and future residents, who will be working/living at the ECARG

Property after the COPR is remediated and ECARG is permitted to implement its development plans.

Honeywell must implement hydraulic controls on the eastern perimeter of the ECARG Property so as to prevent the re-contamination of the Site with hexavalent chromium contamination from Study Area 5. The Court concludes that installation of such hydraulic controls is necessary to protect human health at the ECARG Property.

As provided in the Order being issued herewith, the parties shall meet with the Special Master, within thirty days of his appointment, and arrive at a Work Plan for installing such hydraulic controls as may be necessary to prevent the Site from becoming re-contaminated with hexavalent chromium at levels exceeding the applicable 240 ppm residential limit due to groundwater flow from Study Area 5.

The Court will require Honeywell to provide and maintain financial assurances to insure that the excavation, removal and backfilling work required to comply with this Court's injunctive order is accomplished. Both New Jersey and federal statutory law recognize the appropriateness of requiring financial assurances in connection with the remediation of contaminated property. In New Jersey, the party responsible for remediation of contaminated property is required to provide financial assurances in an amount equal to or greater than the estimated cost of the remediation; is required to increase the amount of the financial assurances if the estimated cost of the remediation increases; is permitted to use the financial assurance to pay for actual costs of the remediation; is permitted to request a decrease in the amount of the financial assurance when the estimate of the cost of the remediation decreases; and is required to maintain the financial assurances in effect for a term not less than the actual time necessary to perform the remediation.

An appropriate financial assurance amount based upon the estimated costs of the remediation will be included

in the Court's final judgment, based upon the recommendation of the Special Master.

RCRA § 7002(e) provides that a court, "in issuing any final order in any action brought pursuant to [section 7002] ..., may award costs of litigation (including reasonable attorney and expert witness fees) to the prevailing or substantially prevailing party, whenever the court determines such an award is appropriate." 42 U.S.C. § 6972(e). Having concluded that ECARG has prevailed on its claim against Honeywell under RCRA § 7002(a)(1)(B), and finding that the award of costs is appropriate, the Court hereby orders Honeywell to pay ECARG all reasonable attorneys' fees, expert witness fees and others costs ECARG has incurred in furtherance of its RCRA claim against Honeywell in this action.

A petition setting forth all costs (including attorneys' fees and expert witness fees) being claimed by ECARG under 42 U.S.C. § 6972(e) shall be submitted to the Court within sixty days from the date of entry of the Order issued herewith.

2. Honeywell is strictly liable to ECARG under New Jersey Common Law

In Count V of its Third Amended Cross-Claims, ECARG seeks to hold Honeywell strictly liable under New Jersey common law for damages and injunctive relief arising out of Mutual's disposal of COPR and the resulting chromium contamination at the ECARG Property.

To prevail on a claim for strict liability, two elements must be demonstrated: (1) that the defendant's disposal of waste constituted an "abnormally dangerous activity," and (2) that such activity has harmed the plaintiff. *See T & E Industries v. Safety Light Corp.*, 123 N.J. 371 (1991); *New Jersey Turnpike Authority v. PPG Industries, Inc., et al.*, 16 F.Supp.2d 460, 479 (D.N.J. 1998); *Department of Environmental Protection v. Ventron*, 94 N.J. 473 (1983).

As set forth below, the Court concludes that both of these elements of Honeywell's strict liability under common law are established in this case.

In determining whether Mutual's disposal of COPR at the ECARG Property and its failure to remove the COPR constitutes an "abnormally dangerous activity," the Court must consider the factors set forth in the *Restatement (Second) of Torts* § 520, which are: (a) "the existence of a high degree of risk of some harm to the person, land or chattels of others;" (b) "the likelihood that the harm that results from it will be great;" (c) "the inability to eliminate the risk by the exercise of reasonable care;" (d) "the extent to which the activity is not a matter of common usage;" (e) "the inappropriateness of the activity to the place where it is carried on;" and/or (f) "the extent to which its value to the community is outweighed by its dangerous attributes." *Ventron*, 94 N.J. at 159. A determination of whether an activity is "abnormally dangerous" must be made on a case-by-case basis, taking all relevant circumstances into consideration. *Id.*

As demonstrated below, the Court concludes that under each of the factors set forth in the Restatement (Second) of Torts § 520, Mutual's disposal and failure to remove the COPR at the ECARG Property constitutes an "abnormally dangerous activity" that subjects its successor, Honeywell, to strict liability.

The Court concludes that Mutual's disposal of COPR at the ECARG Property poses a "high degree of risk of some harm to the person, land or chattels of others" within the meaning of *Restatement (Second) of Torts* § 520. The Court reaches this conclusion on the basis of evidence discussed above, which demonstrates that: (1) Mutual's disposal of COPR has caused extensive chromium contamination in soil, surface water, groundwater and sediments at and near the ECARG Property in levels greatly exceeding all applicable NJDEP environmental limits; and (2) the COPR and

resulting chromium contamination at the ECARG Property present imminent and substantial risks to both humans and environmental receptors. *See, e.g., Jersey City Redevelopment Authority,* 1987 WL 54410 at *4 (finding that the disposal of chromium waste at plaintiff's property posed a "high degree of risk of some harm to the person, land or chattels of others" because the waste contained hexavalent chromium, a known human carcinogen, and chromium contamination in soil at the plaintiff's property exceeded NJDEP's chromium cleanup value).

The Court concludes that Mutual's disposal of COPR at the ECARG Property also satisfies the Restatement factor that "the likelihood that the harm that results [from the activity] will be great." *Restatement (Second) of Torts* § 520. This factor is satisfied based on the evidence discussed in Section I, *supra,* which demonstrates that Mutual's COPR contains highly toxic hexavalent chromium; that hexavalent chromium presents serious health risks (including cancer); and that Mutual's disposal activities at the ECARG Property continue to cause chromium contamination in soil, surface water, groundwater and sediments in levels hundreds of times higher than NJDEP's acceptable limits. *See, e.g., Jersey City Redevelopment,* 1987 WL 54410 at *6 (finding this element of the Restatement satisfied because chromium contamination from the waste that had been disposed of at the site at issue had "migrated and entered ... ground water"); *Ventron,* 94 N.J. at 492 (finding that mercury contamination in creek sediments satisfied this element of the Restatement, and explaining that "[d]etermination of the magnitude of the damage includes recognition that the disposal of toxic waste may cause a variety of harms, including groundwater contamination via leachate, surface water contamination via runoff or overflow, and poison via the food chain").

The Court concludes that the risks posed by Mutual's disposal of COPR at the ECARG Property could not be

eliminated "by the exercise of reasonable care." *Restatement (Second) of Torts* § 520. As the New Jersey Supreme Court observed in *Department of Environmental Protection v. Ventron, supra,* "[w]ith respect to the ability to eliminate the risks involved in disposing of hazardous wastes by the exercise of reasonable care, *no safe way exists to dispose of [toxic waste] by simply dumping it onto land or into water.*" *Ventron,* 94 N.J. at 492 (emphasis added). Just like the waste at issue in *Ventron* (mercury), the evidence in this case demonstrates that there was no safe way to dispose of chromium waste at a property like the ECARG Property, which is located in a densely-populated urban area, given the capacity of hexavalent chromium to cause cancer, chrome sores, allergic contact dermatitis and other serious adverse health effects in humans. *See Jersey City Redevelopment,* 1987 WL 54410 at *6 (finding that this element of the *Restatement* analysis had been met because the defendants' disposal of chromium waste on the plaintiff's property posed significant health risks against which the unsuspecting public is not equipped to protect itself). The serious health and environmental risks posed by the COPR that Mutual disposed at the ECARG Property clearly could not have been "eliminated by the exercise of reasonable care" on the part of Mutual. *Restatement (Second) of Torts* § 520. To the contrary, as set forth above, those risks can only be abated by excavating and removing all of the COPR from the Property.

Turning to the next two Restatement factors, the Court concludes that Mutual's disposal of approximately one million tons of toxic, highly alkaline COPR at a property located on a river and in an urban area such as Jersey City was neither "a matter of common usage" nor "appropriate to the place where it was carried out" within the meaning of *Restatement (Second) of Torts* § 520. The Court finds support for this conclusion in the *Ventron* case, in which the New Jersey Supreme Court recognized that the disposal of toxic hazardous waste "is particularly inappropriate in the

Hackensack Meadowlands, an environmentally sensitive area where the arterial waterways will disperse the pollution through the entire ecosystem." *Ventron*, 94 N.J. at 492; *see also T & E Industries*, 123 N.J. at 394 (finding that the defendant's processing and disposal of radium in the Jersey City area was an abnormally dangerous activity because doing so "is particularly inappropriate in an urban setting"). The Court finds that Mutual's disposal of chromium waste at the ECARG Property clearly was "inappropriate" to the place it was conducted because, as in *Ventron*, it involved the disposal of toxic waste into and around the Hackensack River. *See Ventron*, 94 N.J. at 492. Mutual's disposal activities have caused hexavalent chromium to disperse throughout the environment at and near the ECARG Property, including environmentally sensitive groundwater, surface water and river sediments, at levels greatly exceeding all applicable NJDEP environmental limits.

The Court further finds that the "inappropriate" nature of Mutual's COPR disposal activities at the ECARG Property is demonstrated by the evidence, demonstrating that it was foreseeable that this 34 acre toxic waste dump created by Mutual would be developed someday as a residential development thereby exposing future construction workers, future utility workers and future residents at the Site to an unacceptable risk of harm. It is also foreseeable that such a large tract in an urban area would attract trespassers. *See Jersey City Redevelopment*, 1987 WL 54410 at *6 (finding that disposal of chromium waste in Jersey City was "inappropriate" within the meaning of the *Restatement* because "it was foreseeable for [defendants] to anticipate the utilization of said [chromium] fill in residential areas" such as the plaintiff's property).

Turning to the last Restatement factor (*i.e.*, the extent to which the "value to the community," if any, of the activity "is outweighed by its dangerous attributes"), the Court takes notice of the fact that in *Ventron*, the New Jersey Supreme

Court found that the disposal of dangerous toxic waste into the environment "is a critical societal problem in New Jersey," and thus that the value of such disposal activities, if any, is substantially outweighed by the serious health and environmental problems caused by them. *See Ventron*, 94 N.J. at 492. This sentiment was echoed in the *Jersey City Redevelopment Authority* case, in which this Court concluded that although the chromium waste at issue was claimed to have served some limited utilitarian purpose as fill, such alleged value "is far outweighed by its dangerous attributes and the risks that it posed to the environment." *Jersey City Redevelopment*, 1987 WL 54410 at *6 (emphasis added); *see also T & E*, 123 N.J. at 394 (holding that because the risks associated with the handling and disposal of radium waste materials in the environment far outweigh the usefulness of radium to society, defendant's disposal activities were "abnormally dangerous").

Here, the Court has been presented with no evidence of any redeeming qualities of the COPR that Mutual disposed of at the Site. Instead, as discussed above, the record is replete with evidence that the COPR and chromium contamination caused thereby pose serious health and environmental risks, demonstrating that the "dangerous attributes" of Mutual's disposal activities far outweigh any alleged value attributed to them by Honeywell.

The Court finds the New Jersey Supreme Court's decision in *T & E Industries v. Safety Light Corp.*, is directly on point and especially instructive in determining whether Mutual's disposal activities constitute an "abnormally dangerous activity" within the meaning of the *Restatement (Second) of Torts* § 520. In the *T & E Industries* case, the defendant (USRC) had disposed radium waste on a tract of land in Orange, New Jersey from approximately 1917 to 1926, during which time it had reason to know that radium posed serious health risks to humans. *T & E Industries*, 123 N.J. at 376-78. USRC never cleaned up the property, and in

1943 sold the site to a third-party (Arpin) who used it as a manufacturing facility for a period of time and eventually sold it to the plaintiff (T & E) in 1974. *Id.*, at 376-379. USRC never notified Arpin, T & E or anyone else about the presence of the radium on the property. *Id.*, at 382-83. Shortly after T & E purchased the site in 1974, state inspectors determined that it was highly contaminated with radium at levels exceeding applicable federal and state regulatory limits. *Id.*, at 379-380. The court held that USRC's disposal of toxic radium waste into the environment, exacerbated by its failure to warn the successors in title, constituted an "abnormally dangerous" activity that subjected USRC to strict liability for all of the plaintiff's cleanup costs and other resulting damages. *Id.* Significantly, the court rejected USRC's *caveat emptor* and "assumption of the risk" defenses despite T & E's apparent knowledge of the radium contamination at the site. *Id.*

Another case directly on point is *Jersey City Redevelopment Authority v. PPG Industries, Inc.*, 1987 WL 54410 (D.N.J. 1987), in which the District Court held that the distribution and disposal of *COPR* containing *hexavalent chromium* was an "abnormally dangerous activity." *See Jersey City Redevelopment*, 1987 WL 54410 at *6-7. In that case, the plaintiff sought to hold defendant PPG strictly liable for cleanup costs that the plaintiff incurred as a result of another party's disposal of PPG's chromium waste on plaintiff's property. Applying the *Restatement* factors, Judge Sarokin found PPG liable and held the disposal to be an "abnormally dangerous activity" due to (1) the fact that plaintiff's property had become contaminated with hexavalent chromium at levels in excess of the NJDEP cleanup levels; and (2) the serious adverse health effects associated with chromium, which PPG was fully aware of at the time the disposal occurred. *Id.* at *4.

The Court concludes that this case is on "all fours" with *T & E Industries* and *Jersey City Redevelopment.* Just

as in the *Jersey City Redevelopment* case, the COPR that Mutual disposed at the Site is a "hazardous waste" containing high levels of hexavalent chromium. Moreover, just as in *Jersey City Redevelopment* (as well as *T & E Industries*), the disposal of Mutual's COPR at the Site has resulted in extensive environmental contamination in soil, surface water and groundwater in concentrations greatly exceeding NJDEP limits. As described above, exceedances of these applicable environmental limits demonstrate that Mutual's disposal of COPR at the Site posed "a high degree of risk of some harm to the person, land or chattels of others" and that the resulting harm was "great" within the meaning of the *Restatement,* and thus that it was "abnormally dangerous." *T & E Industries,* 123 N.J. at 394.

Further, just as in *Jersey City Redevelopment* and *T & E Industries,* the record in this case demonstrates that Mutual disposed its COPR at the Site with full knowledge of the serious adverse health effects caused by hexavalent chromium, including lung cancer. Mutual's own documents demonstrate that during the period it was dumping COPR at the Site, Mutual was besieged by compensation claims from its employees for nasal perforations and chrome sores suffered at Mutual's Jersey City Chrome Plant, and that Mutual knew that employees at the Jersey City plant were contracting lung cancer from exposure to hexavalent chromium. Indeed, the evidence demonstrates that Mutual even commissioned a special study to explore alternative disposal methods for its COPR in Jersey City, the results of which caused Mutual's president to acknowledge that the company's chromium waste presented a "danger" and "might cause a great deal of trouble." Such knowledge necessarily put Mutual on notice of the serious potential health and environmental hazards posed by the COPR it was disposing at the Site. *See, e.g., Jersey City Redevelopment,* 1987 WL 54410 at *9; *T & E Industries,* 123 N.J. at 395.

The Court rejects Honeywell's argument that Mutual's knowledge about occupational health hazards associated with chromium did not equate to knowledge that its COPR could present health or environmental risks to the public. The New Jersey Supreme Court specifically rejected this same argument in *T & E Industries,* stating:

> Here defendant knew that it was processing radium, a substance concededly fraught with hazardous potential. It knew that its employees who handled radium should wear protective clothing; it knew that some employees who had ingested radium had developed cancer; and prior to the sale of the property, it knew that the inhalation of radon could cause lung cancer. Despite that wealth of knowledge concerning the harmful effects of radium exposure, defendant contends that it could not have known that disposal of the radium-saturated by-products behind the plant would produce a hazard. That contention appears to rest on the idea that somehow the radium's potential for harm miraculously disappeared once the material had been deposited in a vacant corner of an urban lot, or at the least that one might reasonably reach that conclusion--a proposition that we do not accept. (*T & E,* 123 N.J. at 395.)

The Court further finds that Mutual's own documents strongly suggest that Mutual actually knew during the period prior to its sale of the ECARG Property to Amy Joy in 1954 that Mutual's COPR had the potential to cause lung cancer and/or adverse health effects. This fact is demonstrated by evidence in the record including: (1) a 1937 study conducted by the Mellon Institute led the Vice President of Mutual to conclude that use of the COPR as a fertilizer would be "dangerous" and pose "a great deal of trouble"; (2) a 1951

internal Mutual memorandum in which the Vice President of Mutual was informed of high concentrations of hexavalent chromium in the air at the "Residue Department" at the Jersey City Chrome Plant; and (3) a 1953 study by U.S. Public Health Service (in which Mutual was a participant) in which it was concluded that "pulmonary carcinoma found in this industry is associated primarily with the *roast and residue materials* ", that acid soluble chromium compounds thought to be carcinogenic appeared "*principally in the residue,*" and that chromium was "present in appreciable amounts wherever roast or residue is encountered."

The Court further finds that despite having knowledge of the serious adverse health effects posed by chromium and its COPR, Mutual did not provide any warnings to the unsuspecting public and instead irresponsibly sold the property to Amy Joy Realty in 1954, who immediately developed the Site as a drive-in theater. Significantly, there is no evidence that Mutual ever warned Amy Joy or any other subsequent owner (including Daylin) of the chromium waste or the health risks posed by the property.

The Court concludes that Mutual's behavior clearly amounts to "abnormally dangerous activity" within the meaning of the Restatement.[12] *See, e.g., T & E Industries,*

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[12] The Court rejects Honeywell's argument that Mutual's abnormally dangerous disposal activities at the ECARG Property were not "abnormally dangerous" because the federal government allegedly was purchasing chromium products from Mutual for a short period during World War II. This argument fails on several grounds, not the least of which is the fact that Mutual began disposing chromium waste at the property in or before 1905--a minimum of 35 years before the war effort began. Although World War II ended in 1945, the end of the war apparently did not stop Mutual from dumping more toxic COPR at the property. The evidence shows that Mutual's disposal activities continued for at least nine more years until at least 1954. Finally, there is absolutely no evidence that during World War II the government ever approved, controlled, or much less even knew about Mutual's disposal of toxic

123 N.J. at 390-95, 587 A.2d 1249; *Jersey City Redevelopment*, 1987 WL 54410 at *6.[13]

The Court concludes that the second element of Honeywell's strict liability (*i.e.*, that ECARG has been "harmed" by Mutual's abnormally dangerous activities) has been established due to the fact that ECARG has suffered substantial monetary damages including but not limited to the costs incurred in connection with the demolition of the Goodrich (Valley Fair) Building, security, removal and disposal of chromium-contaminated soil, legal fees, lost rents, and the loss of its ability to sell or develop the ECARG Property. *See, e.g.*, *T & E*, 123 N.J. at 399 (holding that the owner of property contaminated by the disposal of radium

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COPR at the ECARG Property. The Court finds that the decision to dispose of chromium waste at the Site was Mutual's and Mutual's alone.

[13] The Court also rejects Honeywell's attempt to blame Mutual's disposal activities on the State of New Jersey, which Honeywell alleges granted Mutual the right to pollute the environment when the state deeded property to Mutual along the shoreline of the Hackensack River. The Court finds that the "riparian grants" to which Honeywell cites in support of this argument simply conveyed certain "land under water" along the shore of the Hackensack River and the right to use such property for "solid filling" and/or construction of "piers." There is absolutely no mention of chromium in these grants, nor any evidence that the State of New Jersey intended for Mutual to "fill" the Site with highly toxic, highly alkaline chromium wastes generated at Mutual's Jersey City Chrome Plant. The Court concludes that these grants were not intended by the State to serve as a blanket license for Mutual to poison the ECARG Property or adjacent Hackensack River with highly toxic hexavalent chromium. This is evidenced by the fact that NJDEP has subsequently penalized Honeywell for its disposal activities and ordered it to take action to remediate the severe conditions that resulted. In any event, the State's "riparian grants" certainly do not shield Honeywell from liability for any damages incurred by ECARG arising out of Mutual's "abnormally dangerous" COPR disposal activities. *See, e.g.*, *Kennery v. Scientific, Inc.*, 204 N.J. Super. 228, 249-50 (Law Div. 1985) (fact that New Jersey licensed the landfill at issue did not prevent land owners from bringing strict liability claims against waste generators who had disposed of waste at the site).

waste had been "harmed" because (i) it had incurred cleanup costs to address the contamination, and (ii) the contamination had caused it to curtail its business operations on the property); *Jersey City Redevelopment,* 1987 WL 54410 at * 8-9 (plaintiff suffered "harm" due to costs incurred in remediating chromium contamination).

On the basis of the foregoing, the Court concludes that Mutual's successor, Honeywell, is strictly liable under New Jersey common law for all damages ECARG has incurred as a result of Mutual's disposal and failure to remove the COPR at the ECARG Property and the extensive chromium contamination that plagues the ECARG Property. *See T & E Industries,* 123 N.J. at 399-400 (awarding plaintiff its cleanup costs, the costs of relocating its business, and such other damages that "flowed from defendant's inappropriate disposal of [waste]"). In addition, ECARG is entitled to a declaratory judgment awarding it full "indemnification" from Honeywell for any and all future costs that ECARG may incur until the chromium contamination is fully remediated by Honeywell. *T & E,* 123 N.J. at 398.

The Court rejects Honeywell's argument that ECARG "assumed the risk" of the chromium contamination by allegedly having knowledge of the chromium when it acquired the ECARG Property. This argument fails because the Court finds that when Daylin purchased Lot 14H and Lot 14J in 1981, Daylin did not "knowingly and voluntarily encounter the risk" posed by Mutual's chromium disposal activities. *T & E,* 123 N.J. at 390.

To show that such an "assumption of risk" occurred, Honeywell must demonstrate that Daylin actually knew of the COPR and extensive chromium contamination when it bought Lot 14H and Lot 14J in 1981. *See, e.g., Bowen Engineering et al. v. Estate of Reeve, et al,* 799 F.Supp. 467, 482 (D.N.J. 1992). Assumption of the risk requires that a person "*knowingly and voluntarily* encounter the risk." *T &*

E Industries, 123 N.J. 390 (emphasis added). For the risk to be "voluntary and knowing," a person must be shown to "understand and appreciate the risk." *Suter v. San Angelo Foundry & Machine Co.*, 81 N.J. 150, 197 (1979). In making this determination, "[t]he courts must apply a *subjective test* to determine whether a plaintiff voluntarily assumed the risk, examining '*what the particular plaintiff in fact sees, knows, understands and appreciates.*'" *Bowen*, 799 F.Supp., at 482, *quoting Restatement (Second) of Torts § 496D, cmt. C* (1965) (emphasis added).

The Court concludes that Daylin did not have knowledge of the presence of COPR or chromium contamination at Lot 14H and Lot 14J when it acquired them in 1981.[14] The record reveals that Daylin believed it was acquiring property on which the Goodrich (Valley Fair) Building (which Daylin leased) was located. Daylin paid $1.2 million for Lot 14H and Lot 14J, a price that was based upon the best price Feil was able to obtain from General Cinema during his arm's length negotiation and which McGuire testified was fair market value.

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[14] The Court rejects Honeywell's argument that Daylin and/or W.R. Grace & Co. "should have known" that Lot 14H and Lot 14J were contaminated with chromium. Honeywell's argument is based upon the testimony of its due diligence expert, Hart, and his review of documents which relate to the construction of the Goodrich (Valley Fair) Building and the construction problems that were experienced at the Goodrich (Valley Fair) Building from the early 1970's through and beyond 1981. The Court finds Hart's testimony to be unpersuasive and further finds that the documents that Hart and Honeywell rely upon to support the "should have known" argument do not relate to contamination or environmental problems (with the exception of two October 1980 internal DEP memos (DH-20, DH-22) which Hart testified he had absolutely no evidence that Daylin ever received prior to June 1981), but instead, relate to the construction of the Goodrich (Valley Fair) Building and/or construction problems experienced at the Goodrich (Valley Fair) Building.

The Court further finds that it was not u ntil 1982 that Daylin actually learned of the presence of chromium at the ECARG Property and that, upon being advised of the chromium contamination, Daylin fully cooperated with the NJDEP by fencing the property, conducting an environmental investigation, and taking steps to identify the party actually responsible for the contamination, *i.e.*, Allied/Honeywell. Based on the record, the Court concludes that Daylin did not "assume the risk" of the COPR or chromium contamination at the ECARG Property, and thus that ECARG may prevail on its strict liability claim against Honeywell. *See T & E,* 123 N.J. at 390, 587 A.2d 1249.

The Court notes that allowing Honeywell to shield itself from liability through an "assumption of the risk" defense would have the perverse effect of transferring responsibility from the polluter to an innocent party that played absolutely no role in causing the chromium contamination at the ECARG Property. The New Jersey Supreme Court specifically counseled against such a result in the *T & E* case, in which it held that the polluter could not hide behind an "assumption of the risk" defense where it had failed to warn the plaintiff (the owner of the property who purchased the site over thirty years after the polluter had sold it to an unsuspecting purchaser) of the risks posed by the polluter's disposal activities. *See T & E Industries,* 123 N.J. at 390, 587 A.2d 1249. In the same vein, Honeywell will not be permitted to shift the blame to ECARG due to any alleged "assumption of the risk" by Daylin. The Court finds no evidence that Mutual, Allied or any of Honeywell's other predecessors ever warned any subsequent purchaser of the Site (including Daylin) of the one million tons of toxic COPR it disposed of at the Site over a period of approximately sixty years.

The Court concludes that the "abnormally dangerous" activities attributable to Honeywell at the ECARG Property constitute "continuing torts," and therefore

that ECARG's strict liability claim is not barred by the six-year statute of limitations, N.J. Stat. Ann. § 2A:14-1, as Honeywell contends. *See Russo Farms v. Vineland Bd. of Educ.*, 675 A.2d 1077, 1084- 86 (N.J. 1996).

In *Russo Farms v. Vineland Bd. of Educ.*, the New Jersey Supreme Court held that a party who creates a hazard (there, an incorrectly constructed drainage system that caused repeated flooding of plaintiff's property) that "can be physically removed or legally abated" is under a continuing legal duty to remedy the condition. *Russo Farms*, 675 A.2d at 1086. As long as the condition persists, the defendant is deemed to have "commit[ted] a new tort, including a new breach of duty, each day, triggering a new statute of limitations." *Id.* at 1084.

The Court concludes that, like the recurring flood damage suffered by the plaintiff in *Russo Farms*, Mutual's disposal of COPR and resulting chromium contamination at the ECARG Property will continue to cause harm to ECARG until Honeywell removes the COPR, that these conditions "can be physically removed or legally abated" by excavating and removing the COPR from the property, and thus they constitute a "continuing tort" that triggers a new statute of limitations each day the COPR remains at the property. *Russo Farms*, 675 A.2d at 1086; *see T & E Indus., Inc. v. Safety Light Corp.*, 227 N.J.Super. 228, 243 (App.Div. 1988), *aff'd as modified*, 123 N.J. 371 (1991)(holding that the disposal of radon waste constituted an "abnormally dangerous activity" and "continuing tort" because "[w]hile the act of disposing of the toxic waste took place many years ago, the effects ... from the radium tailings will be felt from that time forward until such time that permanent curative action is taken ... [t]herefore, the tort emanates from the act of dumping *and the continuous presence of the toxic waste and the resultant hazardous byproducts* "); *see also National Tel. Coop. Assoc. v. Exxon Corp.*, 38 F.Supp.2d 1, 5-6 (D.D.C. 1998) (applying continuing tort doctrine and

rejecting the contention that landowner's claims for strict liability, negligence, trespass, and nuisance against gasoline company on adjacent lot were barred by statute of limitations); *325-343 E. 56th Street Corp. v. Mobil Oil Corp.*, 906 F.Supp. 669, 675 (D.D.C. 1995) (applying continuing tort doctrine to strict liability claim for injuries to real property brought by landowner against prior occupants of land).

Accordingly, the Court holds that ECARG may recover all damages it sustained during the six-year period immediately preceding the filing of its cross-claims against Honeywell, and all damages incurred thereafter until an appropriate cleanup of the COPR is completed by Honeywell.

Damages - Having found Honeywell strictly liable to ECARG, under Count V of its Third Amended Cross-Claims, for all damages resulting from Mutual's disposal of COPR at the ECARG Property and Honeywell's and its predecessors' failure to remediate the COPR, the Court hereby awards ECARG the following damages:

(a) Demolition Costs--$630,500.00 for the costs ECARG incurred in connection with the demolition of the Goodrich (Valley Fair) Building, which was necessitated due to severe structural damage caused by heaving COPR;

(b) Site Security--$132,000 for the costs ECARG incurred in providing security at the ECARG Property (consisting of $32,200.00 for fence work, $87,500.00 for guard dogs, and $12,300.00 for a property care taker);

(c) Chromium Contaminated Soil--Incremental Cost--$126,000.00 for the incremental cost increase incurred by ECARG in the disposal of chromium contaminated soil at an off-site hazardous waste facility;

(d) Certain IRMs--$89,750.00 for the costs incurred by ECARG for certain interim remedial measures that were installed at the ECARG Property to address the chromium contamination;

(e) Real Estate Taxes--$229,900 for real estate taxes paid on the ECARG Property.

(f) Lost Rents--5/90 through 12/97--$2,810,955.39 for ECARG's lost rents during the period from May 1990 to December 1997. McGuire testified as to the amount of rents which ECARG lost during the period May 1, 1990 through December 31, 1997, as a result of the inability to use the Goodrich (Valley Fair) Building.[15] McGuire based his calculation of lost rents on the fair rental value of the Goodrich (Valley Fair) Building as of May 1990. McGuire's calculation took into account the income and expenses that ECARG would have experienced during that period. Annexed to Grace's Proposed Findings of Fact and Conclusions of Law as Attachment 4 is a calculation of the rent lost by ECARG on a year-by-year basis for the period May 1, 1990 through December 1997 based upon McGuire's testimony and the exhibits introduced regarding ECARG's lost rent claim, *i.e.*, Gr-1313, 1313A and 1314.

(g) Prejudgment Interest--5/90 to 12/97 Lost Rents--The Court concludes that ECARG is entitled to an award of prejudgment interest on its 5/90 through 12/97 lost rent claim.

Prejudgment interest is governed by the law of the forum state. *Zippertubing Co. v. Teleflex Incorporated,* 757 F.2d 1401, 1414 (3d Cir. 1985) (citing *Jarvis v. Johnson,* 668 F.2d 740, 746 (3d Cir. 1982)). With respect to state law claims adjudicated in federal court, the law of the forum state controls the award of prejudgment interest. *Hatco Corporation v. W.R. Grace & Co.--Conn.,* 849 F.Supp. 931, 980 (D.N.J. 1994) (citation omitted).

Under Rule 4:42-11 of the Rules Governing the Courts of the State of New Jersey, prejudgment interest may

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[15] December 31, 1997, was the date on which the Ground Lease and the Joint Venture Agreement expired thereby freeing up the ECARG Site for sale or rental without the expense of the Ground Lease.

be awarded on Grace's common law claims. Principles of equity guide a court in determining whether or not prejudgment interest should be awarded. *Hatco,* 849 F.Supp. at 980 (citing *Gilbert v. Durand Glass Mfg. Co.,* 258 N.J.Super. 320, 331, 609 A.2d 517 (App.Div. 1992)). *See also* PRESSLER, Current N.J. COURT RULES, R. 4:42-11, Comment 9 (GANN). "The equitable purpose of prejudgment interest is to compensate a party for lost earnings on a sum of money to which it was entitled but which has been retained by another.'" *Electric Mobility Corporation v. Bourns Sensors/Controls, Inc.,* 87 F.Supp.2d 394, 403 (D.N.J. 2000) (quoting *North Bergen Rex Transport, Inc. v. Trailer Leasing Co., A Division of Keller Sys., Inc.,* 158 N.J. 561, 574-75, 730 A.2d 843 (1999) (further citation omitted)). *See also De Puy, Inc. v. Biomedical Engineering Trust,* 216 F.Supp.2d 358, 380 (D.N.J. 2001); PRESSLER, Current N.J. COURT RULES, R. 4:42-11, Comment 8 (GANN) ("[P]rejudgment interest is not a penalty but rather its allowance simply recognizes that until the judgment is entered and paid, the defendant has had the use of money rightfully the plaintiff's").

Prejudgment interest begins to run from the date on which the damaged party loses the use of its funds--*i.e.* from the time the expenditures were made. *BP Exploration & Oil, Inc. v. Moran Mid-Atlantic Corp.,* 147 F.Supp.2d 333, 346 (D.N.J. 2001) (citation omitted).

Based upon the attached charts annexed to Grace's Proposed Findings of Fact and Conclusions of Law, the total prejudgment interest on ECARG's lost rent claim from May 1, 1990 through April 30, 2003 is $1,438,556.75.

The Court concludes that ECARG is entitled to an award of prejudgment interest in the amount of $1,438,556.75 through April 30, 2003, with per diem interest thereafter. The Court further concludes that the award of prejudgment interest based upon New Jersey's prejudgment interest rule is consistent with the law in this Circuit.

(h) Weja Back Rent Award--Credit--ECARG is the plaintiff in an action filed in the Superior Court of New Jersey, Hudson County, entitled *W.R. Grace & Co. and ECARG, Inc. v. Weja, Inc., et al.*, Docket No. L-7908-95, Superior Court of New Jersey, Law Division, Hudson County. One of ECARG's claims in the *Weja* case was for the recovery of lost rents. In the *Weja* case, the proofs revealed that actual rent which should have been paid by the tenant, Weja, under the terms of the Weja Lease (DH-744) was $1,931.35 per month or $23,176.20 per year. ECARG's claim for back rent in the *Weja* case is set forth in ECARG's trial brief in that case (DH-719) at page 53. The back rent claim in the Superior Court was based upon Weja's rent being $1,931.35 per month because under the Weja Lease, the rent was to increase above $1,931.35 per month only if 70,000 square feet of the Goodrich (Valley Fair) Building was occupied. The occupancy condition never occurred because of the structural problems with the Goodrich (Valley Fair) Building caused by heaving. Thus, Weja was only responsible for $1,931.35 per month. As set forth in ECARG's trial brief in the *Weja* case, the back rent owed to ECARG through December 31, 1995 (the date of eviction) based upon rent of $1,931.35 was $48,283.75 plus a late charge of 10% (*i.e.*, $4,828.38) totaling $53,112.13.[16] In addition, Weja owed ECARG rent for the period January 1, 1996 to the end of the term of the Weja Lease in the amount of $40,558.35, plus a late charge of 10% (*i.e.*, $4,055.84) for a total of $44,614.19.[17] Thus, ECARG's total back rent claim in the *Weja* case was $97,726.32.[18]

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[16] On page 37 of the *Weja* Decision (DH-793) Judge McLaughlin inadvertently uses a figure of $53,116.52.

[17] Judge McLaughlin used a figure of $44,614.18 in his Decision. *See* DH-793, p. 37-38, 41.

[18] Judge McLaughlin awarded ECARG $97,730.70 ($53,116.52 + $44,614.18). *See* DH-793, p. 41.

ECARG's claim against Honeywell in this case is for all of the rent which could have been earned by ECARG under the Weja Lease had the Goodrich (Valley Fair) Building been able to be used as it was intended. In calculating the damages for lost rent, McGuire referenced the Weja Lease and its provision which required an increased rent to be paid provided at least 70,000 square feet of the Goodrich (Valley Fair) Building was rented. Thus, ECARG's lost rent claim against Honeywell in this matter is based, in part, upon the amount ECARG would have received had the Goodrich (Valley Fair) Building not been destroyed by the heaving caused by the COPR.

ECARG has not collected any portion of the $97,730.70 in back rent that it was awarded by Judge McLaughlin in the *Weja* case. Tr. Vol. 15 (Colloquy)--2895:25- 2896:20. This Court will credit against ECARG's lost rent claim, the amount of the back rent award in the *Weja* case, the amount of ECARG's lost rents for the period 5/90 through 12/97 and prejudgment interest thereon through April 30, 2003 (totaling $4,249,512.14), should be reduced by a sum not to exceed $97,730.70, the actual amount of the credit to equal the amount ECARG actually collects as a result of the back rent award in the *Weja* decision.

(i) Lost Rents 1/98 through 4/03--$2,412,000 for ECARG's lost rents during the period from January 1998 to April 2003. McGuire's testimony with respect to lost rents addressed the period from May 1, 1990 through December 1997 (the date on which the Ground Lease and the joint venture agreement expired). Commencing January 1, 1998, and continuing through the present, ECARG should have been able to continue to rent the Goodrich (Valley Fair) Building at a rental of at least $2.50 per square foot (the figure which McGuire said was the fair rental value of the Goodrich (Valley Fair) Building as of May 1990). Based upon the $2.50 per square foot rental figure, the rents which ECARG lost commencing January 1998 amounted to

$452,250.00 per year or $37,687.50 per month. Annexed to Grace's Proposed Findings of Fact and Conclusions of Law as Attachment 16 is a summary of the rents lost by ECARG during a period of January 1, 1998 through April 2003.

(j) Prejudgment Interest--1/98 through 4/03 Lost Rents--The Court concludes that ECARG is entitled to an award of prejudgment interest on its 1/98 through 4/03 lost rent claim in the amount of $344,156.83 through April, 2003 with *per diem* interests thereafter. Annexed to Grace's Proposed Findings of Fact and Conclusions of Law as Attachment 17 is a summary of the prejudgment interest due on the monthly rental payments which were lost during the period of January 1998 through April 2003. Annexed as Attachments 18 through 23 are breakdowns of the prejudgment interest due on the monthly lost rents for the years 1998 through April 2003.

(k) Future Rents--Judgment will be entered in favor of ECARG and against Honeywell in the amount of $37,687.50 per month for lost future rents, from May 1, 2003 forward, to be paid monthly by Honeywell on the first of each month from the date judgment in this matter is entered until the date that the excavation, removal and back filling of the ECARG Property is complete.

(l) Future Real Estate Taxes--Judgment will be entered in favor of ECARG and against Honeywell requiring Honeywell to pay all future real estate taxes on the ECARG Property as they become due from the date judgment in this matter is entered until the date that the excavation, removal and back filling of the ECARG Property is complete.

Injunction[19]

Having found Honeywell liable to ECARG on Count V of its Third Amended Cross-Claims, the Court enters an injunction requiring Honeywell to:

> (1) Excavate, remove, treat and dispose off-site all COPR at the ECARG Property and backfill the ECARG Property with clean soil such that the 240 ppm hexavalent chromium residual soil cleanup level is attained throughout all of the ECARG Property; and
>
> (2) Establish a hydraulic gradient on the eastern boundary of the Site such that contaminated groundwater from Study Area 5 does not re-contaminate the ECARG Property; and
>
> (3) Remediate chromium contaminated sediments in the Hackensack River in the vicinity of the ECARG Property such that the ER-M of 370 ppm is attained for such sediments; and
>
> (4) Provide work plans with time tables and benchmark dates to the Special Master as provided for in the Conclusions of Law.

Indemnification

The Court awards Grace Defendants a declaratory judgment under Count V of its Third Amended Cross-

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[19] This Court concludes that Honeywell's common law tort liability, based upon the Grace Defendants' cross-claims against Honeywell, also supports the issuance of injunctive relief. *See* RESTATEMENT (SECOND) OF TORTS §936 (1977); *Sheppard v. Township of Frankford*, 261 N.J.Super. 5, 9-10, 617 A.2d 666, 668-69 (App. Div. 1992) (adopting §936 in New Jersey and ruling that trial court erred in failing to issue permanent injunction for continuing tort claim).

Claims, pursuant to 28 U.S.C. §§ 2201 and 2202 and the Uniform Declaratory Judgments Law, N.J.S.A. § 2A:16-50 et seq., awarding Grace Defendants full, total and complete indemnification from Honeywell for any and all future costs and/or liabilities that Grace Defendants may incur in connection with or arising out of the COPR or other chromium contamination at the ECARG Property, including, but not limited to, any and all liabilities and/or costs (including defense costs) that may be incurred by ECARG in connection with or as a result of any third-party claim relating to any COPR or other chromium contamination at, near or from the ECARG Property. *T & E Industries,* 123 N.J. at 398.

A. Honeywell Is Liable To W.R. Grace & Co. And ECARG Under CERCLA § 107(a) For All Response Costs Incurred At The Site

In Count II of their Third Amended Cross-Claims, W.R. Grace & Co. and ECARG assert a cost recovery claim against Honeywell pursuant to CERCLA § 107(a), 42 U.S.C. § 9607(a), which imposes strict and joint and several liability on any "covered person" listed in CERCLA § 107(a)(1)-(a)(4) for *all* past and future costs of response that may be incurred by a CERCLA §107 plaintiff. *See* 42 U.S.C. § 9607(a); *New Castle County, et al v. Halliburton NUS Corp.*, 111 F.3d 1116, 1124 (3rd Cir. 1997).

To prevail on a claim under CERCLA § 107(a), a party must show that: (1) the property at issue is a CERCLA "facility"; (2) there has been a "release" of a "hazardous substance"; (3) the defendant falls within at least one of the categories of "covered persons" defined in CERCLA § 107(a); (4) the costs sought by the plaintiff constitute recoverable "costs of response"; and (5) the plaintiff is not itself a liable party under CERCLA. *See* 42 U.S.C. § 9607(a); *New Castle County,* 111 F.3d at 1124. All five elements are established in this case.

The Court concludes that the first two elements of Honeywell's liability are established under CERCLA § 107(a) on the basis of the parties' stipulation that the ECARG Property is a CERCLA "facility," and that there have been "releases" or threatened "releases" of hexavalent chromium, a CERCLA "hazardous substance," at the property.

As set forth below, the Court concludes that the third element of Honeywell's liability under CERCLA § 107(a) is established on the basis of stipulated facts demonstrating that Honeywell is a "covered person" under CERCLA §§ 107(a)(2), 107(a)(3) and 107(a)(4), each of which provides an independent basis for imposing liability on Honeywell.

CERCLA § 107(a)(2) provides that "any person who *at the time of disposal* of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of" is strictly liable for response costs incurred by any other person at such facility. 42 U.S.C. § 9607(a)(2)(emphasis added). As the statutory language makes clear, section 107(a)(2) renders liable any party who owned a facility at the time hazardous substances were being "disposed" on the property. *See, e.g., United States v. R.W. Meyer, Inc.*, 889 F.2d 1497, 1506-08 (6th Cir. 1989). The Court concludes that Mutual owned the Site from approximately 1895 to 1954 during which time it was actively disposing chromium, a "hazardous substance," throughout the property, and thus Mutual's successor, Honeywell, is a "covered person" under 42 U.S.C. § 9607(a)(2).

CERCLA § 107(a)(3) imposes strict liability upon "any person who by contract, agreement or otherwise arranged for disposal ... of hazardous substances owned or possessed by such person, by any other party or entity, at any facility." 42 U.S.C. § 9607(a)(3). As the Third Circuit has recognized, section 107(a)(3) covers any party who has taken

action to dispose of its hazardous substances at a facility. *See United States v. Alcan Aluminum Corp.*, 964 F.2d 252, 266 (3d Cir. 1992). The Court concludes that Mutual generated approximately one million tons of COPR, a "hazardous substance," at Mutual's Jersey City Chrome Plant during the period from approximately 1895 to 1954, and "arranged" for the disposal of such substances at the Site, thus rendering Mutual and its successor Honeywell a "covered person" under 42 U.S.C. § 9607(a)(3).

Section 107(a)(4) of CERCLA imposes strict liability on "any person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities ..." U.S.C. § 9607(a)(4). This provision encompasses any person who has caused a hazardous substance to be transported to a disposal site. *See, e.g., Tippins Inc., v. USX Corp.*, 37 F.3d 87, 90 (3d Cir. 1994). The Court concludes that Mutual "transported" chromium waste, a hazardous substance, to the ECARG Property through an above ground conveyor during the period from approximately 1895 to 1954, and thus that Mutual and its successor, Honeywell, are "covered persons" under 42 U.S.C. § 9607(a)(4).

The Court concludes that W.R. Grace & Co. and ECARG have incurred recoverable "costs of response" under CERCLA, and thus that the fourth element of Honeywell's CERCLA liability has been met. Although CERCLA does not define the phrase "costs of response," it broadly defines the term "response" as "remove, removal, remedy and remedial action," which are in turn defined to include "such actions as may be necessary to monitor, assess and evaluate the release or threat of release of hazardous substances," "[t]he cleanup of released hazardous substances from the environment," and "the disposal of removed material." *See* 42 U.S.C. §§ 9601(23) and (25). Courts construing these definitions have held that CERCLA "costs of response" include all site investigation costs, costs of providing site security, and any costs that may be required to remove

hazardous substances from a contaminated property. *See, e.g., Bowen Eng'g,* 799 F.Supp. at 476 (costs of testing soil for the presence of hazardous substances deemed recoverable "response costs"); *Gen. Elec. Co. v. Litton Indus. Automation Sys.,* 920 F.2d 1415, 1419-20 (8th Cir. 1990) (costs of excavating and removing soil contaminated with hazardous substances found to be recoverable "costs of response" under CERCLA); *Hatco Corp. v. W.R. Grace & Co.,* 849 F.Supp. 931, 971 (D.N.J. 1994) (costs of investigating nature and extent of hazardous substances at site were recoverable "costs of response"); *Amoco Oil Co. v. Borden,* 889 F.2d 664, 672 (5th Cir. 1988).

The Court concludes that W.R. Grace & Co., on behalf of its former subsidiary Daylin, incurred "costs of response" at the Site during the early and mid-1980's by fencing the property and taking other security measures to protect unsuspecting members of the public from the chromium on the site. The Court further concludes that since it acquired the ECARG Property in 1986, ECARG has incurred "costs of response" by paying the incremental cost increase for the disposal of chromium-contaminated soil excavated at the gas station/car wash property, by paying for a portion of the cost of certain interim remedial measures, and by providing site security. These are clearly "costs of response" as defined in CERCLA.[20] *See* 42 U.S.C.

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[20] The Court concludes that the response costs incurred by W.R. Grace & Co. on behalf of Daylin and ECARG are "necessary" within the meaning of CERCLA. The record in this case is replete with evidence of chromium seeping from the ECARG Property into the Hackensack River, the groundwater, and even pushing up through cracks in the asphalt. The record further shows that the chromium contamination vastly exceeds all applicable regulatory limits at the ECARG Property. *See* Section I.A, *supra.* Accordingly, the costs incurred by W.R. Grace & Co. on behalf of Daylin and ECARG to address this contamination were "necessary." *See, e.g., Bethlehem Iron Works v. Lewis,* 1996 WL 557592 *52 (E.D. Pa. 1996) (costs "necessary" if in response to threat to health or the environment); *Amoco v. Borden,* 899 F.2d 664 (5th Cir. 1990) (costs

§§ 9601(23) and 9601(25); *Bowen Eng'g*, 799 F.Supp. at 476; *Gen. Elec. Co.*, 920 F.2d at 1419-20; *Hatco*, 849 F.Supp. at 971; *Amoco Oil Co.*, 889 F.2d at 672.

The fifth element to be established in a CERCLA § 107 cost recovery action is that the plaintiff is not itself a liable party under CERCLA. A party is not liable under CERCLA if: (1) it does not fall within one of the categories of "covered persons" set forth in CERCLA § 107(a), *or* (2) it qualifies for one of the statutory defenses in CERCLA § 107(b). *See New Castle County*, 111 F.3d at 1124.

This Court has previously held that W.R. Grace & Co., is not a liable party under CERCLA § 107(a) because it never owned or operated the Site. *See ICO v. Honeywell International, Inc.*, 215 F.Supp.2d at 502. Hence, the Court concludes that W.R. Grace & Co., satisfies the fifth element and is entitled to bring a CERCLA § 107(a) cost recovery action against Honeywell. *New Castle County*, 111 F.3d at 1124.

The Court concludes that ECARG also is entitled to bring a CERCLA § 107 claim against Honeywell because ECARG qualifies for the "third party" defense set forth in CERCLA § 107(b)(3), 42 U.S.C. § 9607(b)(3). Under this provision, the owner of a contaminated site has a complete defense to CERCLA liability if it is established that: (1) the release of hazardous substances at issue was caused solely by

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"necessary" and recoverable if expended in response to contamination exceeding state regulatory limit). Furthermore, the Court finds that these costs are consistent with the applicable requirements of the National Contingency Plan ("NCP") because such costs were incurred for site security, disposal of chromium-contaminated soil, and certain interim remedial measures at the ECARG Property. These costs were recognized in *Amland* as "clearly within the definition of removal actions" and therefore "compensable under CERCLA." *Amland*, 711 F.Supp. at 795; *see also Amoco*, 899 F.2d at 671 (granting summary judgment as to liability upon proof that plaintiff incurred response costs, including "security measures and site investigation," where contaminants at site exceeded applicable regulatory thresholds).

a third party (Mutual), provided that such third party's "act or omission" causing the contamination did not "occur in connection with a contractual relationship existing directly or indirectly with the defendant" (ECARG); and (2) ECARG exercised "due care" with respect to the chromium and took "precaution against the foreseeable acts of omissions of such third party ..." 42 U.S.C. § 9607(b)(3).

The Court concludes that ECARG satisfies the first element of the "third party" defense because Mutual is solely responsible for the dumping of approximately one million tons of COPR at the Site. Further, Mutual and ECARG never had any direct or indirect contractual relationship.

The Court concludes that the second element of the CERCLA "third party" defense is satisfied because ECARG exercised requisite "due care" with regard to the chromium at the ECARG Property. Under the CERCLA third-party defense, "due care" must be exercised by an owner after it becomes aware of the presence of the hazardous substance. *See, e.g., Town of New Windsor v. Tesa Tuck, Inc.,* 935 F.Supp. at 310, 313 (S.D.N.Y. 1996); *HRW,* 823 F.Supp. at 349. Where, as here, the owner has cooperated with state authorities, it has satisfied the "due care" and "reasonable precautions" requirements of CERCLA § 107(b)(3). *See, e.g., New Windsor,* 935 F.Supp. at 314. The Court concludes that this requirement of the § 107(b)(3) defense is satisfied because ECARG fully cooperated with NJDEP in its attempts to compel Honeywell to conduct an investigation and remediation of the property, ECARG provided site security measures to protect the public from the chromium, ECARG incurred costs to properly dispose of chrome contaminated soil from the property, and ECARG has entered into an access agreement with Honeywell to facilitate remediation of the contamination.

Accordingly, the Court concludes that ECARG qualifies for the CERCLA "third party" defense, and thus is entitled to bring a cost recovery action against Honeywell

under CERCLA § 107(a). *New Castle County*, 111 F.3d at 1124.

On the basis of the foregoing, the Court concludes that Honeywell is strictly and jointly and severally liable to W.R. Grace & Co. and ECARG under Count II of their Third Amended Cross-Claims, pursuant to 42 U.S.C. § 9607(a), for all "costs of response" they have incurred at the ECARG Property.

B. Past Costs of Response

Having concluded that Honeywell is liable to W.R. Grace & Co. and ECARG under Count II of their Third Amended Cross-Claims, pursuant to 42 U.S.C. § 9607(a), the Court hereby awards W.R. Grace & Co. and ECARG the following response costs:

(a) $132,000.00 for costs incurred in providing security at the ECARG Property (consisting of $32,200.00 for fence work, $87,500.00 for guard dogs, and $12,300.00 for a property care taker);

(b) $126,000.00, which is the incremental cost increase incurred in the disposal of chromium contaminated soil at an off-site hazardous waste disposal facility in connection with the cleanup of the gas station/car wash property; and

(c) $89,750.00, which represents a portion of the cost of certain interim remedial measures that were installed at the ECARG Property to address the chromium contamination.

In Count XII of their Third Amended Cross-Claims, W.R. Grace & Co. and ECARG seek a declaratory judgment that Honeywell is strictly liable under CERCLA § 107(a) for all future response costs that W.R. Grace & Co. and/or ECARG may incur at the ECARG Property. Section 113(g)(2) of CERCLA expressly provides for a declaratory judgment of this sort, stating that "[i]n any such action described in this subsection [including action brought under

§ 107(a)], the court shall enter a declaratory judgment on liability for response costs or damages that will be binding on any subsequent action or actions to recover further response costs or damages." 42 U.S.C. § 9613(g)(2) (emphasis added). To obtain a declaratory judgment under CERCLA § 113(g)(2), a plaintiff need only prove that the elements of liability under CERCLA § 107(a) have been met. *See, e.g., United States v. Davis,* 20 F.Supp.2d 326, 332-4 (D.R.I. 1998).

Having found that all elements of Honeywell's liability under CERCLA § 107(a) have been established as set forth above, the Court enters a declaratory judgment pursuant to CERCLA § 113(g)(2), 42 U.S.C. § 9613(g)(2), declaring that Honeywell is strictly and jointly and severally liable for any and all future "costs of response" that W.R. Grace & Co. and/or ECARG may incur at the ECARG Property consistent with the NCP. 42 U.S.C. § 9613(g)(2).

ECARG Is Not Liable To Honeywell For Contribution Under CERCLA §113

In Count I of its Cross-Claims, Honeywell seeks contribution from ECARG pursuant to CERCLA § 113(f) for an allocative share of the alleged response costs Honeywell has incurred at the ECARG Property.[21] Having previously determined that ECARG qualifies for the CERCLA "third-party" defense set forth in CERCLA § 107(b)(3), the Court concludes that ECARG is not liable to Honeywell under CERCLA § 113(f) and therefore will enter judgment for ECARG on Honeywell's CERCLA claim.

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[21] The Court previously dismissed Honeywell's CERCLA contribution claims against W.R. Grace & Co. and W.R. Grace Ltd. based on its finding that neither party have ever owned or operated the *See ICO v. Honeywell International, Inc.*, 215 F. Supp.2d at 498-502.

Honeywell Is Liable To ECARG And W.R. Grace & Co. Under The New Jersey Spill Act

In Count IV of their Third Amended Cross-Claims, W.R. Grace & Co. and ECARG seek to recover from Honeywell under the New Jersey Spill Compensation and Control Act ("Spill Act"), N.J.S.A. § 58:10-23.11 *et seq.*, all "cleanup or removal costs" they have incurred, and may incur in the future, in connection with any discharges of chromium at the Site.

The Spill Act provides that "[a]ny person who has discharged a hazardous substance, or is in any way responsible for any hazardous substance, shall be strictly liable ... for all cleanup and removal costs no matter by whom incurred." N.J.S.A. § 58:10-23.11.g.c.1. In addition, N.J.S.A. § 58:10- 23.11.f.2 provides that "[w]henever one or more dischargers or persons cleans up and removes a discharge of a hazardous substance, those dischargers and persons shall have a right of contribution against all other dischargers and persons in any way responsible for a discharged hazardous substance who are liable for the cost of the cleanup and removal of that discharge of a hazardous substance."

To prevail on their Spill Act claim in Count IV, W.R. Grace & Co. and ECARG therefore must show that (1) the Site is a "facility" as defined in the Spill Act; (2) chromium or other "hazardous substances" have been "discharged" at the Site; (3) Honeywell is "[a]ny person who has discharged a hazardous substance, or is in any way responsible for any hazardous substance" at the Site; and (4) W.R. Grace & Co. and ECARG have incurred "cleanup and removal costs" as defined in the Spill Act. *See* N.J.S.A. §§ 58:10- 23.11.g.c.1 and 58:10-23.11.f.2.[22]

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[22] Honeywell has stipulated that chromium is a "hazardous substance" as defined in the Spill Act.

The Court concludes that the first two elements of Honeywell's liability under the Spill Act have been established on the basis of the parties' stipulations that the ECARG Property is a "facility," that the chromium at the property is a "hazardous substance," and that there have been "discharges" of chromium at the property as those terms are defined in the Spill Act.

The Court further concludes that Honeywell is "[a]ny person who has discharged a hazardous substance, or is in any way responsible for any hazardous substance" within the meaning of N.J.S.A. §§ 58:10- 23.11.g.c.1, on the basis of the undisputed evidence that Honeywell's predecessor.[23] Mutual dumped approximately one million tons of chromium contaminated COPR at the ECARG Property. *See, e.g., Atlantic City Municipal Utilities Authority v. Hunt,* 210 N.J.Super. 76, 96, 509 A.2d 225, 235-236 (App.Div. 1986) (holding that "the pouring of hazardous waste on the ground" rendered defendant liable as a "discharger"); *Ventron,* 94 N.J. at 498-99 (disposal of mercury waste on ground rendered defendant liable under Spill Act).

Finally, as set forth in the discussion of Honeywell's liability under CERCLA, the Court concludes that W.R. Grace & Co. and ECARG have incurred recoverable "cleanup and removal costs" [24] at the ECARG Property by installing security fencing, by paying the incremental cost

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[23] The Spill Act defines a "discharge" as "any intentional or unintentional action or omission resulting in the releasing, spilling, leaking, pumping, pouring, emitting, emptying or dumping of hazardous substances into the waters or onto the lands of the Site...." N.J.S.A. §§ 58:10-23.11b(h).

[24] The Spill Act defines "clean up and removal costs" as "all costs associated with a discharge incurred by ... any person with written approval from the Department in the (1) removal or attempted removal of hazardous substances, or (2) taking of reasonable measures to prevent or mitigate damage to the public health, safety, or welfare ..." N.J.S.A. § 58:10-23.11b.

increase for the disposal of chromium-contaminated soil excavated at the gas station/car wash property, and by paying for a portion of the cost of certain interim remedial measures. The Court concludes that such costs were approved by and/or incurred at the direction of NJDEP and thus are recoverable under the Spill Act.

Accordingly, the Court concludes that W.R. Grace & Co. and ECARG are entitled to a judgment under Count IV of their Third Amended Cross-Claims, pursuant to N.J.S.A. § 58:10-23.11.g.c.1 and/or 58:10-23.11.f.2, awarding them the following "cleanup and removal costs" incurred.

A. $132,000 for costs incurred in providing security at the ECARG Property (consisting of $32,200.00 for fence work, $87,500.00 for guard dogs, and $12,300.00 for a property care taker);

B. $126,000.00, which is the incremental cost increase incurred in the disposal of chromium contaminated soil at an off-site hazardous waste disposal facility in connection with the cleanup of the gas station/car wash property; and

C. $89,750.00, which represents a portion of the cost of certain interim remedial measures that were installed at the ECARG Property to address the chromium contamination.

To avoid the necessity of re-litigating the issue of Honeywell's liability under the Spill Act for any future "cleanup and removal costs" that may be incurred at the ECARG Property, the Court enters a declaratory judgment under Count XII, pursuant to 28 U.S.C. §§ 2201 and 2202 and the Uniform Declaratory Judgments Law, N.J.S.A. § 2A:16-50 et seq., declaring Honeywell strictly liable to W.R. Grace & Co. and ECARG for any and all future "cleanup and removal costs" they may incur in connection with any COPR or other chromium contamination at the ECARG Property. *See, e.g., Analytical Measurements v. Keuffel & Esser Company*, 843 F.Supp. 920, 930 (D.N.J.

1993) (entering a declaratory judgment that defendant was liable to plaintiff under the Spill Act "for all future costs associated with any cleanup, required by the NJDEP, of substances that were dumped on the property [by defendant]").

ECARG Is Not Liable To Honeywell Under The Spill Act

The Court concludes that title to the ECARG Property passed from GRC to ECARG on November 26, 1986. *See, e.g., Noyes v. Estate of Cohen*, 123 N.J.Super. 471, 478-479 (Ch.Div. 1973) (explaining that the doctrine is in essence "a fiction resting upon the principle that equity regards things which are directed to be done as having actually been performed where nothing intervened to prevent the performance").

It is clear that GRC, ECARG and W.R. Grace & Co. intended for ownership of the ECARG Property to pass to ECARG on November 26, 1986, rather than in October, 1994, when deeds memorializing the November 26, 1986 transfer were formally executed. The undisputed evidence reveals that: (i) deeds transferring the property from GRC to ECARG were prepared in November 1986; (ii) in reliance upon the 1986 transfer, GRC and ECARG executed an "Assignment of Leases and Joint Venture" on November 26, 1986 whereby GRC's interest in the Ground Lease, the Operating Lease and the joint venture agreement was assigned from GRC to ECARG; (iii) in reliance upon the 1986 transfer, Goodrich and ECARG executed a new joint venture agreement in November 1986 that superceded the prior joint venture agreement between Goodrich and Diana; (iv) Harry Pierson (Director of Real Estate in 1986) testified that W.R. Grace & Co. intended for title to transfer from GRC to ECARG in November 1986; and (v) in December 1986, in reliance upon the 1986 transfer, W.R. Grace & Co.

advised Goodrich that GRC had transferred all of its interest in Lots 14H and 14J to ECARG as of November 26, 1986.

The Court concludes that the date on which Daylin acquired Lot 14H and Lot 14J in 1981 is attributable to ECARG as its acquisition date because ECARG took title to Lot 14H and Lot 14J on the basis of an intra-corporate transfer from GRC, formerly known as Daylin.

The Court concludes that in 1986, intra-corporate transfers of property by a parent corporation from one subsidiary to another did not require an environmental assessment to be performed.

The Court concludes that ECARG qualifies as an "innocent purchaser" pursuant to § 58:10-23.11g.d.(5) because Daylin acquired fee title to Lot 14H and Lot 14J in 1981; Daylin acquired Lot 14H and Lot 14J after Mutual's discharge of a hazardous substance at the property; at the time Daylin acquired Lot 14H and Lot 14J, it did not know and had no reason to know that any hazardous substance had been discharged at the property; Daylin did not discharge the hazardous substance, is not in any way responsible for the hazardous substance, and is not a corporate successor to the discharger (Mutual/Honeywell) or to any entity that is in any way responsible for the hazardous substance or to anyone liable for cleanup and removal costs; Daylin notified NJDEP of Allied's/Honeywell's responsibility for the hazardous substance located at Lot 14H and 14J after the actual discovery of the discharge; Daylin and W.R. Grace & Co. fully cooperated with the NJDEP upon the actual discovery of the discharge of the hazardous substance; and at the time of Daylin's acquisition of Lot 14H and Lot 14J, it made all appropriate inquiry as to the previous ownership and uses of Lot 14H and Lot 14J, based upon the generally accepted good and customary standards being followed at the time.

In its Cross-Claims, Honeywell seeks contribution from ECARG pursuant to the New Jersey Spill Act for an allocative share of the alleged "cleanup and removal costs"

Honeywell has incurred at the ECARG Property. [25] ECARG asserts a defense to Honeywell's Spill Act claim under the "innocent purchaser" defense set forth in N.J.S.A. § 58:10-23.11g.d.(5), which is available to a party who acquired contaminated property prior to September 14, 1993 and are able to demonstrate that (1) it did not "discharge" any of the wastes at issue at the site, (2) it did not know and had no reason to know of the discharges prior to acquiring the site, having exercised "all appropriate inquiry on the previous ownership and uses of the property based upon generally accepted good and customary standards at that time," and (3) it provided timely notice of the discharges to NJDEP upon learning of them. *See* N.J.S.A. § 58:10- 23.11g.d.(5).

Accordingly, because ECARG has a complete defense to liability under the Spill Act, the Court enters judgment in ECARG's favor on Honeywell's Spill Act claim. N.J.S.A. § 58:10-23.11g.d.(5)

Honeywell Has Breached Paragraph 4.7 of the License Agreement

In Count VIII of its Cross-Claims, ECARG seeks an order requiring Honeywell to comply with its obligation under paragraph 4.7 of the 1997 "License Agreement" between Honeywell and ECARG, which requires, *inter alia,* that Honeywell "fully and completely comply with all applicable laws, rules and regulations of NJDEP and any Governmental Agency" in the exercise of its RI/FS efforts and in connection with the cleanup of chromium contamination at the ECARG Property. *See* Grace 753, ¶¶ 1.2, 4.7.

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[25] The Court previously dismissed Honeywell's Spill Act claims against W.R. Grace & Co. and W.R. Grace Ltd. based on its finding that neither party has ever owned or operated the ECARG Property. See *ICO v. Honeywell International, Inc.*, 215 F.Supp.2d at 498-502. .

The Court concludes, as set forth in the following paragraphs, that Honeywell is required under New Jersey law to remediate the hexavalent chromium contamination at the ECARG Property to NJDEP's residential soil cleanup criteria for hexavalent chromium of 240 ppm:

a. The Remediation Act, N.J.S.A. 58:10B-1 et seq., establishes two types of soil clean up standards for the remediation of contaminated sites in New Jersey: (i) "residential" levels that allow for the safe use of the land in an unrestricted manner by the owner; and (ii) alternative, less stringent "non-residential" levels that prohibit residential use and are enforced by means of a permanent deed restriction. *See* N.J.S.A § 58:10b-12(c)(1); N.J.S.A. § 58:10B-12.g(2).

b. The Remediation Act unambiguously provides that a contaminated property must be remediated to "residential" soil cleanup levels unless the owner of the property expressly consents to the recording of a deed restriction. *See* N.J.S.A. § 58:lOB-13(b). In this regard, Section 58:lOB-13(b) of the Remediation Act states that: "If the owner of the real property does not consent to the recording of a notice [deed restriction] pursuant to paragraph (2) of subsection a. of this section, the department shall require the use of a residential soil remediation standard in the remediation of that real property." N.J.S.A. § 58:lOB-13(b).

c. Section 58:10B-13.a(2) of the Remediation Act similarly dictates that engineering or institutional controls may not be employed at a contaminated site without the consent of the landowner. *See* N.J.S.A. § 58:10B-13.a(2).

d. There is no dispute that ECARG has not consented to deed restrict the ECARG Property due to its plans to develop the property for residential/commercial use.

e. Accordingly, Honeywell must meet the residential cleanup standard for hexavalent chromium in connection with the cleanup of the property. N.J.S.A. §§ 58:lOB-13(b), 58:1011-13.a(2); *see E.I. du Pont de Nemours and Company v. State, Department of Environmental Protection*

and Energy, 283 N.J.Super. at 366 (construing N.J.S.A. § 58:1OB-13 and concluding that "[i]f the owner will not give his consent [to a deed restriction], DEP must require nothing less than a residential soil remediation standard").

The Court concludes that to date, Honeywell has failed to conduct a cleanup of chromium contamination at the ECARG Property to the mandatory New Jersey "residential" cleanup level, and thus that it has breached its obligation under paragraph 4.7 of the License Agreement.

Remedy (License Agreement)

Having found that Honeywell is in breach of its obligation under paragraph 4.7 of the License Agreement, the Court concludes that ECARG is entitled to a declaratory judgment under Counts VIII and XII, pursuant to 28 U.S.C. §§ 2201 and 2202 and the Uniform Declaratory Judgments Law, N.J.S.A. § 2A:16-50 et seq., that Honeywell, pursuant to paragraph 4.7 of the License Agreement, is required to conduct a remediation of all hexavalent chromium contamination at the ECARG Property to the applicable 240 ppm residential cleanup level. As more fully set forth above, the Court concludes that the only remedy that is capable of meeting the applicable 240 ppm cleanup level for hexavalent chromium is excavation and removal of all COPR and other materials containing hexavalent chromium at levels exceeding 240 ppm from the ECARG Property. The Court concludes that such removal remedy is necessary to protect human health and the environment, that it is in the public interest, and that the economic harm to Honeywell from the requirement that it fund such a permanent remedy does not outweigh the interests of ECARG and the public in a prompt clean up of the chromium contamination.

Negligence

In Count VII of its Cross-Claims, ECARG asserts a negligence claim against Honeywell. ECARG argues that

Honeywell's negligence arises from Mutual and Allied's failure to warn Daylin of the presence of hexavalent chromium and COPR at Lot 14H and Lot 14J.

Daylin acquired Lots 14H and 14J in 1981. At the time of Daylin's acquisition, neither Mutual nor Allied had warned Daylin in any manner that the property which Daylin was acquiring consisted entirely of COPR. Similarly, neither Mutual nor Allied warned Daylin of the health risks and/or environmental risks which the COPR and hexavalent chromium posed. However, by 1982, Daylin was aware of the fact that Lot 14H and Lot 14J were contaminated with hexavalent chromium. Furthermore, by 1983, Daylin was aware that Lot 14H and Lot 14J consisted of approximately one million tons of COPR which had been disposed of by Mutual over a period of approximately sixty years.

ECARG's negligent failure to warn claim against Honeywell arose no later than 1983. The Court therefore concludes that ECARG's negligent failure to warn claim against Honeywell is time barred pursuant to N.J.S.A. 2A:14-1. Count VII of ECARG's Cross-Claims is **dismissed.**

Honeywell's Claims For Contribution And Declaratory Judgment

In Counts III and IV of its Cross-claims, Honeywell seeks a judgment against the Grace Defendants under the New Jersey Joint Tortfeasors Contribution Law and a declaratory judgment, pursuant to CERCLA's declaratory judgment provision, 42 U.S.C. § 9613(g)(2), New Jersey's Uniform Declaratory Judgments Law, N.J.S.A. § 2A:16-50 *et seq.*, and the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202, that the Grace Defendants are liable for Honeywell's costs and damages at the ECARG Property. As set forth below, the Court enters judgment in favor of the Grace Defendants on Count III and IV because Honeywell's substantive RCRA, CERCLA and Spill Act claims against the Grace Defendants fail, and thus there is no basis for a claim for contribution or declaratory judgment.

A right to contribution only arises under the Joint Tortfeasors Contribution Law when an "injury or damage is suffered ... as a result of the wrongful act, neglect or default of joint tortfeasors" and one of the joint tortfeasors pays more than his pro rata share of the damage. N.J.S.A. § 2A:53A-3 (1999); *Erkins v. Case Power & Equip. Co.*, 164 F.R.D. 31, 33 (D.N.J. 1995). A contribution claimant "must allege and prove that the party against whom he makes [the claim] is a joint tortfeasor within the meaning of the Act." *Mijon v. Acquaire,* 144 A.2d 161, 168 (N.J. App. Div. 1958); *New Jersey Office Supply, Inc. v. Feldman,* 1990 U.S. Dist. Lexis 6620, *13-14 (D.N.J. June 4, 1990) ("the onus of proof of the common burden is on the person demanding a share of the burden").

On the basis of the entire record, the Court concludes that Honeywell cannot meet this burden because there is no evidence that any of the Grace Defendants are "tortfeasors" with regard to the chromium contamination at the ECARG Property, let alone "jointly" with Honeywell. Thus, a

judgment in the Grace Defendants' favor shall be entered on Honeywell's claim for contribution (Count III).

The Court further concludes that because Honeywell cannot sustain its burden on its substantive RCRA, CERCLA and Spill Act claims against the Grace Defendants, as set forth above, Honeywell is not entitled to a declaratory judgment. *Aralac v. Hat Corp.*, 166 F.2d 286 (3d Cir. 1948) (Declaratory Judgments Act provides no substantive rights; requirements and restrictions of underlying substantive cause of action still govern); *Southland Corp. v. Ashland Oil*, 696 F.Supp. 994, 999 (D.N.J. 1988) (party seeking declaratory judgment of CERCLA liability must prove each element of § 107 CERCLA claim, including defendant's liability as "owner," "operator," etc.). Accordingly, a judgment in favor of the Grace Defendants is entered on Count IV of Honeywell's Cross-Claims.

ECARG's Claims For Indemnity And Contribution

In Count IX of their Cross-Claims, the Grace Defendants seek indemnification from Honeywell pursuant to New Jersey common law for any and all costs, including attorney fees, that the Grace Defendants may be forced to incur as a result of or in connection with any relief granted to plaintiffs against the Grace Defendants. A party is entitled to common law indemnification where its liability is entirely constructive, vicarious, and not based on any fault of its own. *See, e.g., T & E Industries,* 587 A.2d at 1263 (common law indemnity granted because "[a]s between an unsuspecting purchaser and a seller who has engaged in an abnormally dangerous activity and polluted the property, the polluter should bear the cleanup expenses"); *Adler's Quality Bakery v. Gaseteria, Inc.*, 159 A.2d 97 (N.J. 1960).

On the basis of the entire record, the Court concludes that the Grace Defendants' liability under RCRA to Plaintiffs is entirely constructive, vicarious, and not based on any fault

of the Grace Defendants, as the sole cause of the "imminent and substantial endangerment" which forms the subject of plaintiffs' RCRA claim is the COPR that was disposed at the ECARG Property by Mutual. The Court finds that these facts present a classic case for indemnity. *T & E Industries,* 587 A.2d at 1263.

In Count X of their Third Amended Cross-Claims, the Grace Defendants similarly seek a judgment against Honeywell under the New Jersey Joint Tortfeasors Contribution Law, N.J.S.A. § 2A:53A-3 (1999), awarding the Grace Defendants any and all costs, including attorneys' fees, that they may be required to pay plaintiff in this action. A right to contribution arises under the Joint Tortfeasors Contribution Law when an "injury or damage is suffered ... as a result of the wrongful act, neglect or default of joint tortfeasors" and one of the joint tortfeasors pays more than his pro rata share of the damage. N.J.S.A. § 2A:53A-3 (1999); *Erkins,* 164 F.R.D. at 33.

On the basis of the entire record, the Court concludes that Honeywell is the sole tortfeasor with regard to the chromium contamination at the ECARG Property because its predecessor Mutual disposed of all the chromium-contaminated COPR at the ECARG Property. Thus, any costs that may be imposed on the Grace Defendants as a result of Plaintiffs' claim would exceed the Grace Defendants' pro rata share, and instead should be the responsibility of the only tortfeasor, Honeywell.

Accordingly, the Court enters a judgment for the Grace Defendants on Counts IX and X of their Third Amended Cross-Claims awarding them full and complete indemnity and contribution from Honeywell for any and all costs, including attorneys' fees, that the Grace Defendants may incur as a result of or in the performance of any relief awarded to plaintiffs in this action. *T & E Industries,* 587 A.2d at 1263; N.J.S.A. § 2A:53A-3 (1999); *Erkins,* 164 F.R.D. at 33.

A PERMANENT REMEDY IS NECESSARY TO ELIMINATE THE IMMINENT AND SUBSTANTIAL ENDANGERMENT TO HEALTH AND THE ENVIRONMENT CAUSED BY THE CONDITION OF THE SITE

This Court has both inherent power and specific statutory authority to enjoin Honeywell to remedy the imminent and substantial endangerment at the Site.

In issuing equity decrees, the trial court is vested with broad discretionary posers. *Lemon v. Kurtzman*, 411 U.S. 192, 200 (1973); *Glenside West Corp. v. Exxon Co., USA* 761 F.Supp. 1118, 1132 (D.N.J. 1991). A court of equity traditionally has had the power to fashion any remedy deemed necessary and appropriate to do justice in the particular case. *United States v. Price, supra*, 688 F.2d at 211.

Section 7002(a)(2) of RCRA, 42 U.S.C. 6972(a)(2), which gives the right to citizens to sue and which is the basis for this action provides that:

> The district court shall have jurisdiction, * * * to restrain any person who has contributed or is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste referred to in paragraph (1)(B), to order such person to take such other action as may be necessary, or both, or to order the Administrator to perform the act or duty referred to in paragraph (2), as the case may be, and to apply any appropriate civil penalties under section 69028(a) and (g) of this title. [emphases added].

Section 7003(a) of the Act, 42 U.S.C. § 6973(a), sets forth the right of the federal government to sue to abate imminent and substantial endangerments and contains the

same language emphasized above concerning the statutory power to order appropriate injunctive relief. The House Committee report underlying Section 7003(a), states (Subcommittee on Oversight and Investigations, Committee on Interstate and Foreign Commerce, H.R. Committee Print No. 96-IFC 31, 96th Cong., 1st Sess. 32 (1979) (hereafter "H.R. Committee Print No. 96-IFC-31") (quoted in *United States v. Price, supra,* 688 F.3d at 213)):

> The section's broad authority to "take such other actions as may be necessary" includes both short and long-term injunctive relief, ranging from the construction of dikes to the adoption of certain treatment technologies, upgrading of disposal facilities, and removal and incineration. [emphasis added]

The Court of Appeals for the Third Circuit has held:

> The unequivocal statutory language and this legislative history make it clear that Congress, by enacting section 7003, intended to confer upon the courts the authority to grant affirmative equitable relief to the extent necessary to eliminate any risks posed by toxic wastes. [Emphasis added] (*United States v. Price, supra,* 688 F.2d at 213-214)

This Court has the power to issue a mandatory injunction under RCRA to abate the risks posed by environmental contamination. *United States v. Price, supra,* 688 F.2d at 214 ("Congress, in the endangerment provisions of RCRA * * * sought to invoke nothing less than the full equity powers of the federal courts in an effort to protect public health, the environment, and public water supplies from the pernicious effects of toxic wastes. Courts should not undermine the will of Congress by either withholding relief or granting it grudgingly"). The expansive language of

the statutory provisions contained both in Section 7003 and 7002 was intended to confer "overriding authority to respond to situations involving a substantial endangerment to health or the environment." *Id.* at 213 (citing H.R. Committee Print No. 96- IFC 31, *supra*, p. 32). There is no doubt that the provision authorizes the cleanup of a Site if the action is necessary to abate a threat to public health or the environment. *United States v. Price, supra*, 688 F.2d at 214.

The Supreme Court has stated that under RCRA, as opposed to CERCLA (the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601, *et seq.*), there is no requirement that the response costs being sought are reasonable. *Meghrig v. KFC Western, supra* 516 U.S. at 486. *See also* 42 U.S.C. § 6972(a)(2) ("The district court shall have jurisdiction, * * * to order such person to take such other action as may be necessary * * *.") However, Plaintiffs submit that, in view of the overwhelming evidence of an imminent and substantial endangerment to human health and the environment (*see* Findings of Fact 64-231), the costs of excavation here are entirely reasonable.

Plaintiffs and the Grace Defendants have met the standards for the issuance of an injunction.

A court must consider four factors when determining whether a permanent injunction should issue: (1) success on the merits; (2) the possibility of irreparable harm to the movant if the injunction is denied; (3) the potential harm to the non-moving party; and, if applicable, (4) the public interest. *ACLU v. Black Horse Pike Regional Bd. Of Educ.*, 84 F.3d 1471,1477 n. 2 (3d Cir. 1996).

As stated above, this Court has concluded that Plaintiffs have succeeded on the merits in establishing Honeywell's liability for violation of section 7002(a) of RCRA, 42 U.S.C. § 6972(a).

"Environmental injury, by its nature, can seldom be adequately remedied by money damages and is often

permanent or at least of long duration, *i.e.* irreparable." *Amoco Production Co. v. Village of Gambell, Alaska,* 480 U.S. 531, 545 (1987); *see PIRG v. Yates Industries, Inc.,* 757 F.Supp. 438, 454 (D.N.J. 1991). If such injury is likely, the balance of harms will usually favor the issuance of an injunction to protect the environment. *Ibid.*

This Court has concluded that the Site does present an imminent and substantial endangerment to health and the environment. The hexavalent chromium at the Site, left unabated, presents irreparable harm to human health and the environment. Moreover, NJDEP has determined that permanent measures must be implemented to prevent the ongoing exposure of human and environmental receptors to chromium from the Site. Therefore, the threat of irreparable harm to the public and the environment favors the issuance of an injunction.

The Court further concludes that injunctive relief is necessary to prevent irreparable harm to Plaintiffs and the public in light of Honeywell's history of delay in investigating and remediating the Site since it was first directed to do so by the State of New Jersey some twenty years ago.

This Court also concludes that any potential economic harm to Honeywell from the issuance of an injunction is not sufficient grounds for this Court to refuse to enter an injunction. The only foreseeable harm to Honeywell from an injunction compelling it to remediate the Site is economic in nature. The Court is aware of the substantial costs involved in the Court Ordered remediation. However, Honeywell is a large international corporation with revenues in the billions of dollars. The Court therefore concludes that the economic harm to Honeywell from the requirement that it fund a permanent remedy for the Site does not outweigh the interests of the public in a prompt cleanup of the Site that is protective of human health and the environment.

This Court concludes that the excavation and removal of the COPR from the Site is necessary in order to remedy the imminent and substantial endangerment to health and the environment posed by the conditions at the Site.

Honeywell presented no credible evidence that a cap over Study Area 7 and/or a shallow ground water treatment methodology would be an effective permanent remedy to protect human health and the environment at the Site.

This Court concludes that Honeywell must also implement a further investigation and, if found to be necessary, further remedial actions, to remedy the imminent and substantial endangerment which may be posed to health and the environment by the highly contaminated deep groundwater at the Site.

This Court concludes further that Honeywell must implement measures to remedy the imminent and substantial endangerment to health and the environment posed by the chromium contamination of the sediments in the Hackensack River caused by discharges from the Site.

Finally, this Court concludes that due to the extensive nature of the cleanup and Honeywell's continued recalcitrance in effectuating an appropriate cleanup, that the appointment of a Special Master pursuant to Rule 53(b) of the Fed.R.Civ.P. is appropriate.

Therefore, this Court concludes that the issuance of a permanent injunction is appropriate. (*See* Order of May 15, 2003.)

Plaintiffs and Grace are directed to submit a proposed Order of Judgment; Defendant Honeywell shall submit any objections to the proposed Order within ten days of receipt of same.

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

INTERFAITH COMMUNITY ORGANIZATION, *et al.*	)	CIVIL NO. 95-2097 (DMC)
Plaintiffs,	)	
v.	)	
HONEYWELL INTERNATIONAL, INC., *et al.*	)	**FINAL JUDGMENT**
Defendants.	)	

A trial having been conducted in the above captioned action, and for the reasons set forth in this Court's Amended Opinion dated May 21, 2003 ("Amended Opinion"), containing Findings of Fact and Conclusions of Law, pursuant to Fed. R. Civ. P. 58, it is hereby ORDERED, ADJUDGED and DECREED on this 30 day of June, 2003 that:

RCRA CLAIMS

1. Defendant Honeywell International, Inc. ("Honeywell") is liable to Plaintiffs for violation of Section 7002(a)(1)(B) of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6972(a)(1)(B) with respect to the Site which is the subject matter of this suit, namely, Lots 14H, 14J and 14D in Tax Block 1290A, Jersey City, Hudson County, New Jersey. The Site is also known by the New

Jersey Department of Environmental Protection ("NJDEP") as Study Area 7 of the Hudson County Chromium Sites, and consists of three contiguous properties: Site 115 - Roosevelt Drive-In, Site 120 - Furniture Depot (formerly Trader Horn) and Site 157 - the former Clean Machine Car Wash.

2. Defendant Honeywell is liable to ECARG, Inc. ("ECARG") for injunctive relief under Count 1 of ECARG's Third Amended Cross-Claims, pursuant to Section 7002(a)(1)(B) of RCRA, with respect to the property designated as Lot 14H and Lot 14J in Tax Block 1290A, Jersey City, Hudson County, New Jersey (hereinafter, "the ECARG Property"). W.R. Grace & Co.'s claim under Count I is dismissed.

3. Having found that the approximately one million tons of chrome ore processing residue ("COPR") that Honeywell's predecessor, Mutual Chemical Company ("Mutual"), disposed of at the Site "may present an imminent and substantial endangerment to health or the environment" within the meaning of 42 U.S.C. § 6972(a)(1)(B), Honeywell shall, in accordance with the procedures set forth herein: (a) excavate, remove, treat and dispose off-site all COPR, soil and other materials at the Site containing greater than 240 parts per million ("ppm") hexavalent chromium; (b) promptly and completely replace all removed COPR, soil and other materials which are excavated and removed with clean fill; (c) in connection with the excavation and replacement of all COPR, soil and other materials containing greater than 240 ppm hexavalent chromium, promptly implement such hydraulic controls in the vicinity of the eastern border of the Site as may be necessary to prevent re-contamination of the Site by ground water flow from the area known as "Study Area 5" located to the east of the Site; and (d) remedy all chromium contaminated sediments in the Hackensack River in the vicinity of the Site containing chromium at levels at or

exceeding NJDEP's ERM toxicity screening level of 370 ppm.

4. Having found that the contaminated deep groundwater at the Site "may present an imminent and substantial endangerment to health or the environment" within the meaning of 42 U.S.C. § 6972(a)(1)(B), Honeywell shall, test and fully delineate the extent of chromium contamination in deep groundwater at the Site in order to ensure that this contaminated water does not discharge to the Hackensack River, or flow to any fresh water aquifer that is used as a water supply, or to the bedrock. If it is found that chromium contaminated deep groundwater beneath the Site is discharging or threatening to discharge, into the Hackensack River or any other surface water body, or is migrating, or threatening to migrate into the bedrock or an area of a freshwater aquifer that is used as a drinking water supply, Honeywell must take appropriate remedial actions necessary to prevent such discharge or migration. Depending on these test results, the Court will enter a further injunctive order setting forth the appropriate relief. The Court will rely upon the tests and the recommendation of the Special Master in determining appropriate relief.

5. The Court finds that the complexity of this case and the technical nature of the remedial relief ordered herein warrant the appointment of a Special Master under Rule 53 of the Federal Rules of Civil Procedure. The Special Master shall have total oversight responsibility for all aspects of Honeywell's timely, prompt, efficient and complete compliance with the injunctive relief issued against Honeywell pursuant to 42 U.S.C. § 6972(a)(1)(B) as set forth herein, and as is consistent with this Court's Amended Opinion, and shall report to the Court on the compliance of Honeywell at least every sixty days. The Special Master and those retained by him shall receive reasonable compensation for their time and expenses from Honeywell as determined by the Court.

6. Within thirty days of the date of entry of the Court's Order of May 20, 2003 appointing the Special Master, the parties shall meet with the Special Master to formulate a work plan ("Work Plan") including a detailed time schedule with benchmark dates for (a) the excavation, removal, treatment and off-site disposal of all COPR, soil and other materials at the Site containing greater than 240 parts per million ("ppm") hexavalent chromium; (b) the backfilling of the Site with clean fill; (c) the installation of hydraulic controls in the vicinity of the eastern portion of the Site as may be necessary to prevent re-contamination of the Site by ground water flow from Study Area 5; (d) the further testing and full delineation of the extent of chromium contamination in deep groundwater at the Site; and (e) the remediation of the chromium contaminated sediments in the Hackensack River in the vicinity of the Site containing chromium contamination at levels exceeding 370 ppm. The Work Plan shall specifically set forth the means by which human health and the environment shall be fully protected during the remediation process that is being ordered hereunder.

7. The Special Master shall, within thirty days of completion of the Work Plan, submit a report to the Court and the parties as to the details of the Work Plan and time schedules contained herein.

8. Upon consideration of the Special Master's report referenced in paragraph 7, the Court will enter an order specifying the manner and time in which Honeywell shall perform (a) the excavation, removal, treatment and off-site disposal of all COPR, soil and other materials at the Site containing greater than 240 parts per million ("ppm") hexavalent chromium; (b) the backfilling of the Site with clean fill; (c) the installation of hydraulic controls in the vicinity of the eastern portion of the Site as may be necessary to prevent re-contamination of the Site by ground water flow from Study Area 5; (d) the further testing and full delineation

of the extent of chromium contamination in deep groundwater at the Site; and (e) the remediation of the chromium contaminated sediments in the Hackensack River in the vicinity of the Site containing chromium contamination at levels exceeding 370 ppm.

9. During Honeywell's performance of the work required under the provisions of this Judgment, Honeywell shall submit monthly progress reports to the Special Master and the parties no later than the 15th day of each month.

10. Within sixty days of the date of the entry of this Court's Order of May 15, 2003 (the "May 15 Order"), Honeywell shall provide financial assurances in an amount to be determined by the Special Master, as approved by this Court, in order to assure that the remedy and deep ground water study ordered hereunder will be performed.

11. Having prevailed on their RCRA claims, Plaintiffs and ECARG are entitled to an award against Honeywell for all attorneys' fees, costs and expenses they have incurred in furtherance of their RCRA claims in this action. The time for submission of their petition for such fees and costs, in accordance with Rule 54(d) of the Federal Rules of Civil Procedure and Local Rule 54.2 of this Court, is extended to and including sixty days from the date of entry of the May 15 Order.

12. Having found that W.R. Grace & Co., W.R. Grace, Ltd., and ECARG, Inc. ("Grace Defendants") and Roned of Jersey City, Inc. ("Roned") did not dispose of any COPR at the Site, the RCRA claim asserted by Plaintiffs against the Grace Defendants and Roned and the RCRA claim asserted by Honeywell against W.R. Grace & Co. and ECARG be and are hereby dismissed with prejudice.

ECARG'S AND W.R. GRACE & CO.'S STRICT LIABILITY CLAIMS

13. W. R. Grace & Co.'s claim under Count V of Grace Defendants' Third Amended Cross-Claims is dismissed. Honeywell is strictly liable to ECARG under Count V of Grace Defendants' Third Amended Cross-Claims for all harm ECARG has incurred or may incur as a result of Mutual's disposal and failure to remove the COPR which exists at the ECARG Property. The Court hereby awards ECARG the following relief under Count V of Grace Defendants' Third Amended Cross-Claims:

A. Damages

(1) Demolition Costs - $630,500.00 for the costs ECARG incurred in connection with the demolition of the Goodrich (Valley Fair) Building, which was necessitated due to severe structural damage caused by heaving COPR;

(2) Site Security - $132,000.00 for the costs ECARG incurred in providing security at the Site (consisting of $32,000.00 for fence work, $87,500.00 for guard dogs and $12,300.00 for property caretaker);

(3) Chromium Contaminated Soil - Incremental Cost - $126,000.00 for the incremental cost increased incurred by ECARG in the disposal of chromium contaminated soil at an off-site licensed hazardous waste disposal facility;

(4) Certain IRMs - $89,750.00 for the costs incurred by ECARG for certain interim remedial measures that were installed at the Site to address the chromium contamination;

(5) Real Estate Taxes - $229,900 for real estate taxes paid with respect to the ECARG Property;

(6) Lost Rents - 5/90 through 12/97 - $2,810,955.39 for ECARG's lost rents during the period from May 1990 to December 1997;

(7) Prejudgment Interest - 5/90 to 12/97 Lost Rents - ECARG is entitled to an award of prejudgment interest on its (5/90 through 12/97) lost rent claim in the amount of $1,438,556.75 through April 30, 2003, with *per diem* interest of $222.75/day through the date of entry of Judgment in this matter;

(8) The amount of ECARG's lost rents for the period 5/90 through 12/97 and prejudgment interest thereon through April 30, 2003 (totaling $4,249,512.14) should be reduced by a sum not to exceed $97,730.70. The actual amount of the credit to Honeywell shall equal the amount ECARG actually collects as a result of the back rent award in the Weja decision.

(9) Lost Rents 1/98 through 4/03 - $2,412,000 for ECARG's lost rents during the period from January 1998 to April 2003;

(10) Prejudgment Interest - 1/98 through 4/03 Lost Rents - ECARG is entitled to an award of prejudgment interest on its (1/98 through 4/03) lost rent claim in the amount of $344,156.83 through April 2003 with *per diem* interest of $198.25/day through the date of entry of Judgment in this matter;

(11) Future Rents - Honeywell is to pay ECARG the amount of $37,687.50 per month for lost future rents, from May 1, 2003 forward, to be paid monthly by Honeywell on the first of each month from the date Judgment in this matter is entered until the date that the excavation, removal and back filling of the ECARG Property is complete. Completion is to be determined by the Special Master and approved by the Court.

(12) Future Real Estate Taxes - Honeywell is to pay ECARG an amount equal to all future real estate taxes on the ECARG Property as they become due from the date

Judgment in this matter is entered until the date that the excavation, removal and back filling of the ECARG Property is complete. Completion is to be determined by the Special Master and approved by the Court.

B. Injunction

Honeywell is required to:

(1) Excavate, remove, treat and dispose off-site all COPR at the ECARG Property and backfill the ECARG Property with clean soil such that the 240 ppm hexavalent chromium residential soil cleanup level is attained throughout all of the ECARG Property; and

(2) Establish hydraulic controls in the vicinity of the eastern boundary of the Site such that contaminated groundwater from Study Area 5 does not re-contaminate the ECARG Property; and

(3) Test and fully delineate the extent of chromium contamination in deep groundwater at the ECARG Property in order to ensure that this contaminated water does not discharge to the Hackensack River, or flow to any fresh water aquifer that is used as a water supply, or to the bedrock. If it is found that chromium contaminated deep groundwater beneath the ECARG Property is discharging or threatening to discharge, into the Hackensack River or any other surface water body, or is migrating, or threatening to migrate into the bedrock or an area of a freshwater aquifer that is used as a drinking water supply, Honeywell shall take appropriate remedial actions necessary to prevent such discharge or migration. Depending on these test results, the Court will enter a further injunctive order setting forth the appropriate relief. The Court will rely upon the tests and the recommendation of the Special Master in determining appropriate relief; and

(4) Remediate chromium contaminated sediments in the Hackensack River in the vicinity of the Site such that the ERM of 370 ppm is attained for such sediments.

C. Special Master

The Court will appoint a Special Master under the terms as set forth above.

D. Financial Assurances

The Court will require financial assurances from Honeywell as set forth above.

E. Indemnification

The Court awards W.R. Grace & Co. and ECARG a declaratory judgment under Count V and Count XII of Grace Defendants' Third Amended Cross-Claims, pursuant to 28 U.S.C. §§ 2201 and 2202 and the Uniform Declaratory Judgments Law, N.J.S.A. 2A:16-50 *et seq.*, awarding W.R. Grace and Co. and ECARG full, total and complete indemnification from Honeywell for any and all future costs and/or liabilities that W.R. Grace & Co. and ECARG may incur in connection with or arising out of the COPR or other chromium contamination at the Site, including, but not limited to, any and all liabilities and/or costs (including defense costs) that may be incurred by ECARG in connection with or as a result of any third-party claim relating to any COPR or other chromium contamination at, near or from the ECARG Property.

GRACE DEFENDANTS' CERCLA § 107 CLAIM

14. Honeywell is liable to ECARG and W.R. Grace &Co., under Count II of Grace Defendants' Third

Amended Cross-Claims, pursuant to Section 107(a) of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9607(a), for all "costs or response" ECARG and W.R. Grace & Co. have incurred at the Site. The "costs of response" for which Honeywell is liable to ECARG and W.R. Grace & Co. Under CERCLA are:

a. $132,000.00 for costs incurred in providing security at the Site (consisting of $32,200.00 for fence work, $87,500.00 for guard dogs, and $12,300 for a property caretaker);
b. $126,000.00 which is the incremental cost increase incurred in the disposal of chromium contaminated soil at an off-site hazardous waste disposal facility in connection with the cleanup of the gas station/car wash property; and
c. $89,750.00 which represents a portion of the cost of certain interim remedial measures that were installed at the Site to address the chromium contamination.

15. Having found that all elements of Honeywell's liability under CERCLA § 107(a) have been established, the Court enters a declaratory judgment under Count XII, pursuant to 28 U.S.C. §§ 2201 and 2202 and CERCLA § 113(g)(2), 42 U.S.C. § 9613(g)(2), declaring that Honeywell is strictly and jointly and severally liable for any and all future "costs or response" that W.R. Grace & Co. and/or ECARG may incur at the ECARG Property consistent with the NCP.

CERCLA § 113 CLAIMS

16. Having found in favor of W.R. Grace & Co. and ECARG on Count II of Grace Defendants' Third Amended Cross-Claims (CERCLA § 107), Count III of

Grace Defendants' Third Amended Cross-Claims (CERCLA § 113) be and is hereby dismissed as moot.

17. Having found that Honeywell is strictly liable to W.R. Grace & Co. and ECARG on Grace Defendants' CERCLA § 107 claim, Honeywell's CERCLA § 113 claim against the Grace Defendants in Count I of its Second Amended Cross-Claims be and is hereby dismissed with prejudice.

NEW JERSEY SPILL ACT CLAIMS

18. Honeywell is strictly liable to W.R. Grace & Co. and ECARG under Count IV of Grace Defendants' Third Amended Cross-Claims, pursuant to N.J.S.A. § 58:10-23.11.g.c.l and/or § 58:10-23.11.f.2, for all "cleanup and removal costs" they have incurred at the ECARG Property. These costs are:

a. $132,000.00 for costs incurred in providing security at the Site (consisting of $32,200.00 for fence work, $87,500.00 for guard dogs and $12,300.00 for property caretaker);
b. $126,000.00 which is the incremental cost increase incurred in the disposal of chromium contaminated soil at an off-site hazardous waste disposal facility in connection with the cleanup of the gas station/car wash property; and
c. $89,750.00, which represents a portion of the cost of certain interim remedial measures that were installed at the Site to address the chromium contamination.

19. To avoid the necessity of re-litigating the issue of Honeywell's liability under the Spill Act for any future costs that may be incurred at the Site, the Court enters a declaratory judgment under Count XII, pursuant to 28 U.S.C. §§ 2201 and 2202 and the Uniform Declaratory Judgment Law, N.J.S.A. § 2A:16-50 *et seq.*, declaring Honeywell strictly liable to W.R. Grace & Co. and ECARG

for any and all future "cleanup and removal costs" they may incur in connection with COPR or other chromium contamination at the Site.

20. Honeywell's Spill Act claim against ECARG in Count II of Honeywell's Second Amended Cross-Claims be and is hereby dismissed with prejudice.

ECARG'S LICENSE AGREEMENT CLAIM

21. The Court enters a declaratory judgment under Counts VIII, IX and XII of Grace Defendants' Third Amended Cross-Claims, pursuant to paragraph 4.7 of the License Agreement, declaring that Honeywell must conduct a remediation of all haxavalent chromium contamination at the ECARG Property to the New Jersey 240 ppm residential cleanup level and thereafter promptly and completely backfill the ECARG Property with clean fill.

ECARG'S AND W.R. GRACE & CO.'S NEGLIGENCE CLAIMS

22. ECARG's and W.R. Grace & Co.'s negligence claims against Honeywell, as set forth in Count VII of Grace Defendants' Third Amended Cross-Claims, having been found by the Court to be time barred, be and are hereby dismissed with prejudice.

ECARG'S CLAIM FOR INDEMNITY AND CONTRIBUTION

23. Under Count X of Grace Defendants' Third Amended Cross-Claims, pursuant to New Jersey common law, Honeywell shall fully, totally and completely indemnify W.R. Grace & Co. and ECARG may incur as a result of or in connection with any relief granted to Plaintiffs against W.R. Grace & Co. and ECARG.

24. Under Count XI of Grace Defendants' Third Amended Cross-Claims, pursuant to the New Jersey Joint Tortfeasors Contribution Law, N.J.S.A. § 2A:53A-1, *et seq.*, Honeywell shall contribute and pay to W.R. Grace & Co. and ECARG 100% of any and all costs, including attorney fees, that W.R. Grace & Co. and ECARG may incur as a result of or in connection with any relief granted to Plaintiffs against W.R. Grace & Co. and ECARG.

HONEYWELL'S CLAIMS FOR CONTRIBUTION AND DECLARATORY JUDGMENT

25. Counts III and IV of Honeywell's Second Amended Cross-Claims against W.R. Grace & Co. and ECARG for contribution and declaratory judgment be and are hereby dismissed with prejudice.

CONTINUING JURISDICTION

26. The Court will retain jurisdiction in this matter until such time as the Court shall, by separate order, relinquish jurisdiction.

DENNIS M. CAVANAUGH
United States District Judge

United States District Court,
D. New Jersey.
INTERFAITH COMMUNITY ORGANIZATION; Lawrence Baker; Martha Webb Herring; Margaret Webb; Reverend Winston Clarke; Margarita Navas; Hackensack Riverkeeper, Inc., consolidated plaintiff; William Sheehan, consolidated plaintiff; Plaintiffs,
v.
HONEYWELL INTERNATIONAL, INC.; W.R. Grace & Company; ECARG, Inc.; W.R. Grace, Ltd.; Roned Realty of Jersey City, Inc.; Roned Realty of Union City, Inc.; Defendants.
Civil Action No. 95-2097 (DMC).

March 12, 2002.

OPINION

CAVANAUGH, District Judge.

This matter is an environmental cause of action involving numerous motions by all parties. In this Opinion, the Court shall address three motions addressing section 7002, 42 U.S.C. § 6972 of the Resource Recovery Conservation Act ("RCRA"). The first motion is by Defendant Honeywell International, Inc. (formerly "AlliedSignal, Inc.") ("Honeywell") to dismiss Plaintiffs' RCRA count in the Amended Complaint for lack of standing. Second, Plaintiffs' Interfaith Community Organization ("Interfaith"), Lawrence Baker, Martha Webb Herring, Margaret Webb, Reverend Winston Clarke and Margarita Navas have cross-moved for partial summary judgment on this same count, seeking to have the Court decide, as a matter of law, that Plaintiffs have

standing under RCRA to bring this citizen suit. Third, Defendants W.R. Grace & Company, Ecarg, Inc., and W.R. Grace, Ltd. (collectively "the Grace Defendants") along with Plaintiff Interfaith have moved jointly for partial summary judgment against Honeywell on Plaintiff's RCRA claim, seeking to have this Court conclude, as a matter of law, that not only do Plaintiffs have standing, but that no genuine issues of material fact exist as to Honeywell's liability under RCRA.[1] Having decided to address these motions together, the Court's Opinion will first focus on the issue of standing and then turn to whether partial summary judgment is warranted against Honeywell with regard to Plaintiffs' RCRA claim.

The Court, having meticulously reviewed the submissions of all parties regarding the three motions described above, and for the reasons stated in this Opinion, holds that Defendant Honeywell's motion to dismiss for lack of standing is **denied.** Further, Plaintiff Interfaith's motion for partial summary judgment on the issue of standing to bring a citizen suit under RCRA is **granted.** Lastly, the joint motion by Interfaith and the Grace Defendants seeking to establish Honeywell's liability under RCRA as a matter of law is **denied.**

BACKGROUND

The Court's "Background" section adopts a substantial portion of the facts stated in a prior opinion in this case insofar as they remain accurate. *See Interfaith*

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[1] The Court recognizes that Defendants Roned Realty of Jersey City, Inc. and Roned Realty of Union City, Inc. (collectively "the Roned Defendants") have made a motion for summary judgment as to all claims and cross-claims asserted against them, which includes Plaintiff Interfaith's claim under RCRA. However, the Court does not address the Roned Defendants motion in this Opinion.

Community Organization v. AlliedSignal, Inc., 928 F.Supp. 1339 (D.N.J. 1996).

The Parties

This is an action brought by Plaintiffs Interfaith Community Organization ("Interfaith"), Lawrence Baker ("Baker"), Martha Webb Herring ("Herring"), Margaret Webb ("Webb"), Reverend Winston Clarke ("Clarke") and Margarita Navas ("Navas") (collectively the "Plaintiffs") against Defendants Honeywell International, Inc. ("Honeywell"), Roned Realty of Jersey City, Inc. and Roned Realty of Union City, Inc. (together "Roned") and W.R. Grace & Co. ("Grace USA"), ECARG, Inc. ("ECARG") and W.R. Grace, Ltd. ("Grace England") (together "Grace Companies") (collectively the "Defendants") seeking declaratory and injunctive relief mandating the cleanup of environmental contamination at the Roosevelt Drive In site in Jersey City, New Jersey (the "Site").

Interfaith is a not-for-profit corporation incorporated under the laws of the State of New Jersey. Amended Complaint, ¶ 19. Interfaith alleges its interest in chromium contamination in Hudson County and at the Site arose from its (1) inability to locate non-chromium contaminated land in Hudson County upon which it could construct 600 units of affordable single-family housing and (2) the discovery that member churches were built on land contaminated with chromium. *Id.*, ¶¶ 20-21; Affidavit of Reverend Geoffrey Curtiss ("Curtiss Aff."), ¶¶ 4-5. Members of Interfaith reside and work in the vicinity of the Site, frequently drive by the Site and sometimes shop in stores near the Site. Amended Complaint, ¶ 23. The remaining Plaintiffs described below are all members of Interfaith.

Baker is a member of the Monumental Baptist Church, a member church of Interfaith, and lives approximately two miles from the Site. *Id.*, ¶ 26; Affidavit of Lawrence Baker ("Baker Aff."), ¶ 1. From March 1973 through May 1990, Baker worked approximately one-half

mile from the Site. Amended Complaint, ¶ 26; Baker Aff., ¶ 7. From the summer of 1991 through mid-1993, Baker worked as a security guard on property adjoining the Site. Amended Complaint, ¶ 26; Baker Aff., ¶ 2. During this period, Baker alleges that he observed "a greenish/yellowish ooze" on the site, usually after rainfall. Amended Complaint, ¶ 26; Baker Aff., ¶ 3. Mr. Baker's employment requires him to use the Jersey City Authority gas pumps adjacent to the Site once or twice a month. Amended Complaint, ¶ 26. Baker considers the Site a "blight on the neighborhood." *Id.*, ¶ 27.

Herring and Webb are members of the Monumental Baptist Church that claim to live within one-quarter mile of the Site. *Id.*, ¶¶ 28, 30. Herring and Webb have both worked and shopped in locations on or near the Site, such as the Pathmark supermarket located approximately one block from the Site and the Valley Fair store, a former retail establishment located on the Site. *Id.* Like Baker, Herring asserts the Site's present condition adversely affects her aesthetic interests. *Id.*, ¶¶ 29, 31.

Clarke is an individual member of Interfaith and lives less than one-quarter mile from the Site. *Id.*, ¶ 32. Clarke also claims to shop regularly at the Pathmark supermarket near the Site. *Id.* Clarke asserts that he has paid membership fees to Interfaith since 1994 and is concerned about the health risks associated with chromium near his home. Third Affidavit of Reverend Winston Clarke, ¶¶ 3, 7, 8. Clarke also has expressed a concern that the chromium contamination in Hudson County has had a negative impact on the value of his property. While Interfaith did not provide for individual membership until November 1999, Clarke has regularly participated in Interfaith meetings since 1994 and has since possessed voting authority within the organization. Curtiss Aff., ¶ 9.

In August 1991, Navas moved into a condominium located less than one-quarter mile from the Site. Amended

Complaint, ¶ 34. Eight months later, in April 1992, Navas was diagnosed with sarcoidosis, a rare disease that affects the organs of the body and causes pain in the chest, back and joints. Affidavit of Margarita Navas ("Navas Aff."), ¶ 3. Navas is concerned that her condition may be caused or aggravated, at least in part, by the chromium waste near her home. *See id.*, ¶ 6; Amended Complaint, ¶ 34. Navas also alleges that her current exposure to the Site includes shopping at the Parkmark supermarket a few times a week. *Id.*, ¶ 35.

Honeywell, previously named AlliedSignal, Inc. ("AlliedSignal"), is incorporated under the laws of the State of Delaware. *Id.*, ¶ 38. Mutual Chemical Company of America ("Mutual"), a prior subsidiary of AlliedSignal, owned and operated a chromate chemical production facility across the street from the Site from approximately 1905 to 1954. *Id.* The Site was used during this time to dispose of chrome ore residue from the chromate plant. In 1954, Allied Chemical and Dye Corporation acquired Mutual and sold the Site to Amy Joy Realty Corporation for the construction of a drive-in movie theater. *Id.* In March 1955, Allied Chemical and Dye Corporation executed a merger agreement with Mutual and thereby agreed to exonerate, indemnify and hold Mutual harmless against all future liability. *Id.* A few years later, the merged company changed its name to the Allied Corporation and through a merger with Signal Companies, Inc. in 1985, became AlliedSignal, Inc. *Id.* AlliedSignal, Inc. and Honeywell, Inc. merged in the latter half of 1999 to become Honeywell International, Inc.

Grace-USA is a corporation formed under the laws of the State of Connecticut. *Id.*, ¶ 41. Grace-England is a direct subsidiary of Grace USA with a registered office in London, England. *Id.* ECARG is a New Jersey corporation and a subsidiary of W.R. Grace & Co. *Id.* Grace-USA and Grace-England were the sole stockholders of Grace Retail Corporation ("Grace Retail"), which acquired two parcels of

land constituting the largest portion of the Site. *Id.*, ¶ 42. In November 1986, the Channel Acquisition Company ("Channel") acquired Grace Retail and pursuant to a letter agreement, Grace Retail was to distribute some of its assets, including its portion of the Site, to Grace USA and Grace England. *Id.*, ¶ 43. This transfer, however, never occurred. *Id.* Nevertheless, Grace USA and Grace England were unaware the transfer did not occur and acted as owners of the parcels until October 14, 1994. *Id.* On October 14, 1994, then-owner Channel conveyed the parcels to ECARG. *Id.*, ¶ 44.

Roned Realty of Jersey City and Roned Realty of Union City are corporations incorporated under the laws of the State of New Jersey. *Id.*, ¶ 45. The records of the Jersey City Assessor's Office list a Roned Realty Corp. as the owner of a subdivided parcel of the Site. *Id.*, ¶ 45. It is unclear if the owner is either Roned Realty of Jersey City or Roned Realty of Union City. *Id.*

Chromium Contamination at the Site

At present, the Site is 32.2 acres of paved land enclosed by a chain link fence. *See* Declaration of Michael Caffrey, Exhibit A. Mutual owned and operated a chromate chemical production facility (the "Facility") on West Side Avenue and Route 440 in Jersey City, New Jersey until 1954. *Id.* The Facility extracted chromium from chromium ores to produce chromate chemicals. *Id.*, ¶ 46. The process generated chromium-bearing waste that Mutual transported through a pipeline onto the Site. *Id.* In addition to the chromium-bearing waste, Mutual dumped unknown amounts of other refuse at the Site. *Id.* By December 5, 1953, waste at the Site was piled in an area covering approximately ten acres and measuring ten to thirty feet in height. *Id.*

The Site's groundwater flows toward the Hackensack River. *Id.*, ¶48. Plaintiffs assert that pollutants leach into the groundwater, are carried from the Site, and are discharged

into the Hackensack River. *Id.* Drainage ditches lined with a polyvinyl chloride, a layer of another geotextile and gravel are located at the northern and southern edges of the Site leading to the Hackensack River. *Id.*, ¶47. Plaintiffs further allege that during high tide, water from the Hackensack River enters the drainage ditches and chromium is washed from the drainage ditches into the Hackensack River. *Id.*

Potential Health Risks of Chromium

The chromium found at the Site is primarily trivalent and hexavalent chromium. Both forms raise environmental and human health concerns, but hexavalent chromium is by far the more toxic form of chromium compound. Airborne chromium and chromium compounds are categorized as carcinogenic by Environmental Protection Agency ("EPA") standards, but other organizations, such as the National Toxicity Institute, consider all compounds containing chromium to have carcinogenic potential. *See* Risk Assessment for Chromium Sites in Hudson County, New Jersey, 3-16, 3-17 (April 1989), attached as Exhibit 45 to Plaintiff's Memorandum in Opposition to [Honeywell International, Inc.]'s Motion to Dismiss Plaintiff's Amended Complaint and in Support of Plaintiff's Cross Motion for Partial Summary Judgment on the Issue of Standing. Hexavalent chromium can also cause non-carcinogenic ailments by penetrating human skin to cause or exacerbate allergic and irritative effects on the respiratory system, kidneys, and skin. *Id.* at 3-5, 3-19, 3-20, 3-22.

NJDEP Administrative Consent Order

In 1983, Honeywell informed the New Jersey Department of Environmental Protection ("NJDEP") that the Site was contaminated with chromium-bearing waste. *Id.*, ¶61. In that same year, sampling and analysis was conducted at the Site by a contractor hired by the Grace

Companies. *Id.*, ¶ 67. The Grace Companies have taken no further action with regard to the Site. *Id.* In 1987 and 1988, Roned completed an Interim Remedial Action on its portion of the Site, placing a one-foot soil cover and asphalt cover over parts of the Site. *Id.*, ¶ 69. Roned has not adopted additional measures to cleanup the portion of the Site it owns. *Id.*

On December 2, 1988, NJDEP issued a Directive entitled *In the Matter of the Hudson County Chromate Chemical Production Waste Sites and Allied Signal [sic] Inc.; PPG Industries Inc.; Occidental Chemical Corp.; and Maxus Energy Corp.* The Directive made numerous factual findings. AlliedSignal (presently Honeywell) was found to be a successor in interest to Mutual, who operated a plant that generated chromate chemical waste, some of which contained hexavalent chromium. *Id.*, ¶¶ 1, 4. The Directive also found that at the time AlliedSignal sold the Roosevelt Drive In Site in 1954, it possessed "specialized knowledge that the chromate chemical production waste might present environmental and public health risks." *Id.*, ¶12. AlliedSignal was further found to have taken no measures to prevent any potential harm from its waste production. *Id.*, ¶¶12, 16. Lastly, the ACO found that:

> The [NJDEP] has determined that the uncontrolled discharges of hazardous substances from the chromate chemical production waste at the Sites ... are within an area of high population density in the State of New Jersey and that the risk of human exposure to chromate chemical production waste at the Site ... is ongoing. Chromium compounds contained in the chromate chemical production waste are toxic to humans and include demonstrated human carcinogens. These conditions create a substantial risk of imminent

> damage to public health and safety and imminent and severe damage to the environment.

Id., ¶ 18.

The Directive ordered Honeywell (then AlliedSignal) to undertake interim remedial actions to remove, or arrange for the removal of, certain hazardous substances, namely chromium-bearing waste, from the Site and from other locations also contaminated with chromium waste. *Id.*, ¶ 12.

Honeywell contends that it has performed Interim Remedial Measures ("IRM") at the Site pursuant to the Directive. The Directive ordered Honeywell to undertake IRMs at several locations where Mutual's waste had allegedly been deposited, including the Site. The Directive provided that Honeywell "shall" submit an interim remedial work plan, and upon receipt of NJDEP approval, "immediately" commence implementation of IRMs designed to prevent the further discharge of chromium-bearing waste. *Id.*, ¶ 31, 33.

Pursuant to the Directive, Honeywell conducted an IRM at the Site by regrading a portion of the Site and placing a polyvinyl chloride cover over the regraded portion. Amended Complaint, ¶ 61. Thereafter, as part of the IRM and under NJDEP supervision, Honeywell installed a new bulkhead over the existing bulkhead along the Hackensack River. *Id.*, ¶ 61. When the initial polyvinyl chloride cover was damaged by high winds, Honeywell repaired and reinforced the cover. *Id.*, ¶ 62.

On June 17, 1993, Honeywell entered into an Administrative Consent Order ("ACO") with NJDEP. *Id.*, ¶ 64. The ACO requires Honeywell to conduct a remedial investigation and feasibility study ("RI/FS") for eighteen locations, including the Site. *Id.* The ACO establishes a process for conducting a RI/FS at the Site and selecting an appropriate remedial action. *Id.*, ¶ 63. Pursuant to the ACO, Honeywell has committed $10 million to conduct the RI/FS and $50 million to remediate the eighteen locations

referenced in the ACO, including the Site. *Id.* The ACO also provides that if the remediation cost for all eighteen locations exceeds this set amount, Honeywell shall implement a full remediation effort unless it disagrees with the appropriateness of the remedies selected. *Id.* Plaintiffs allege that Honeywell has not faithfully committed itself to the remediation of the Site. *Id.*

Procedural History

Plaintiffs filed a complaint (the "Complaint") on May 3, 1995. At a status conference held on July 27, 1995, Plaintiffs were granted leave to amend the Complaint. The Amended Complaint was filed on August 2, 1995.

In Count I of the Amended Complaint, Plaintiffs allege Defendants violated section 7002(a)(1)(B) of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6972(a)(1)(B), because the chromium-bearing waste present at the Site presents an imminent and substantial endangerment to health or the environment. Amended Complaint, ¶¶ 71-74. The remaining counts of Plaintiff's Amended Complaint have been dismissed. *See Interfaith Community Organization v. AlliedSignal, Inc.*, 928 F.Supp. 1339, 1341, 1351, 1353 (D.N.J.1996).

At present, twelve motions are pending in this matter. This Opinion only addresses three of those twelve motions. The first, filed by Defendant Honeywell on June 6, 2000, is to dismiss Count One of Interfaith's Amended Complaint for lack of standing. The second motion, also filed on June 6, 2000, is a cross-motion by Plaintiff Interfaith for partial summary judgment on this same count. The final motion addressed in this Opinion is by the Grace Defendants and Plaintiff for partial summary judgment as to Honeywell's liability on Plaintiffs' RCRA claim. This motion was filed on August 2, 2001.

DISCUSSION

I. Defendant Honeywell's motion and Plaintiff Interfaith's cross-motion as to standing to bring a citizen suit under RCRA.

A. RCRA and the right to bring a citizen suit.

Beginning in the late 1970's and through the present day, considerable attention has been focused on the harmful effects of hazardous waste. *See* 1 S. Cooke, The Law of Hazardous Waste, § 1.01 at 1-2 (2001). This increased public awareness led to the passage of numerous federal and state statutory schemes intended to "control the management of hazardous waste and to accelerate the cleanup of disposal sites containing these wastes." *Id.* One of the more comprehensive federal environmental statutes is the Resource Conservation and Recovery Act, 42 U.S.C. § 6901, *et seq.*, which was enacted in 1976 to provide a "multifaceted approach toward solving the problems associated" with improperly disposed hazardous waste. *Id.*, § 1.05[1] at 1-5 (*citing* H.R.Rep. No. 1491, 94th Cong., 2d. Sess., pt. 1, at 2 (1976), *reprinted in* 1976 U.S.Code Cong. &Admin. News 6238, 6239). RCRA is primarily targeted at reducing "the generation of hazardous waste and ... ensur[ing] the proper treatment, storage and disposal of that waste which is nonetheless generated, 'so as to minimize the present and future threat to human health and the environment.'" *Meghrig v. KFC Western, Inc.*, 516 U.S. 479, 483, (1996) (*citing* 42 U.S.C. § 6902(b)).

Aside from the authority RCRA provides federal and state authorities to enforce its mandates, section 7002(a) of RCRA also creates a private right of action for individuals to bring citizen suits, permitting private citizens to enforce

RCRA's directives.[2] Through the citizen suit, private individuals and entities, like Plaintiffs, can act as "private

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[2] The full text of section 7002(a) of RCRA, 42 U.S.C. § 6972(a) (West 1995 Supplement 2001), reads:

(a) In general

Except as provided in subsection (b) or (c) of this section, any person may commence a civil action on his own behalf--(1)(A) against any person (including (a) the United States, and (b) any other governmental instrumentality or agency, to the extent permitted by the eleventh amendment to the Constitution) who is alleged to be in violation of any permit, standard, regulation, condition, requirement, prohibition, or order which has become effective pursuant to this chapter; or (B) against any person, including the United States and any other governmental instrumentality or agency, to the extent permitted by the eleventh amendment to the Constitution, and including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment; or (2) against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator.

Any action under paragraph (a)(1) of this subsection shall be brought in the district court for the district in which the alleged violation occurred or the alleged endangerment may occur. Any action brought under paragraph (a)(2) of this subsection may be brought in the district court for the district in which the alleged violation occurred or in the District Court of the District of Columbia. The district court shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce the permit, standard, regulation, condition, requirement, prohibition, or order, referred to in paragraph (1)(A), to restrain any person who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste referred to in paragraph (1)(B), to order such person to take such other action as may be necessary, or both, or to order the Administrator to perform the act or duty referred to in paragraph (2), as the case may be, and to apply any

attorneys general" or "citizen watchdogs" to monitor enforcement and compliance with mandatory cleanup duties. 3 S. Cooke, The Law of Hazardous Waste, § 16.03[1] at 16-83 (2001).

Generally, RCRA provides for three distinct types of citizen suits. First, Section 7002(a)(1)(A) authorizes citizen suits against any person or entity who is in violation of "any permit, standard, regulation, condition, requirement, prohibition, or order which has become effective pursuant" to RCRA. 42 U.S.C. § 6972(a)(1)(A). Second, Section 7002(a)(2) of RCRA permits any person to commence an action against the Administrator of the Environmental Protection Agency ("EPA") for a failure by the EPA "to perform any [nondiscretionary] act or duty" under RCRA. 42 U.S.C. § 6972(a)(2). Lastly, Section 7002(a)(1)(B), as amended in 1984, permits a civil suit against any person or entity "who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present in imminent and substantial endangerment to health or the environment." 42 U.S.C. § 6972(a)(1)(B); *Meghrig,* 516 U.S. at 484, 116 S.Ct. 1251. It is this final type of citizen suit that is at issue in this Opinion.

B. Standing In General.

Standing is not merely a pretrial formality, but rather a constitutional directive that defines and limits the power of federal courts to hear only actual "cases" or "controversies." *See* U.S. CONST., ART. III, § 2, cl. 1. "The constitutional power of federal courts cannot be defined, and indeed has no substance, without reference to the necessity to adjudge the legal rights of litigants in actual controversies." *Valley Forge Christian College v. Americans United for Separation*

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appropriate civil penalties under section 6928(a) and (g) of this title.

of Church and State, 454 U.S. 464, 471 (1982) (*quoting Liverpool S.S. Co. v. Commissioners of Emigration*, 113 U.S. 33 (1885)). As such, the Supreme Court has repeatedly stated that:

> [A]t an irreducible minimum, Article III requires the party who invokes the court's authority to show that he personally has suffered some actual or threatened injury as a result of the putatively illegal conduct of the defendant, and that the injury fairly can be traced to the challenged action and is likely to be redressed by a favorable decision.

Valley Forge Christian College, 454 U.S. at 472 (internal citations and quotation marks omitted). In short, standing requires injury-in-fact, causation and redressability. *Steel Company v. Citizens for a Better Environment*, 523 U.S. 83, 103-04 (1998).

The injury-in-fact requirement for standing requires that a plaintiff allege a "distinct and palpable" injury. *Warth v. Seldin*, 422 U.S. 490, 501 (1975); *Whitmore v. Arkansas*, 495 U.S. 149, 155 (1990). The injury must be "real, earnest and vital," *Chicago & Grand Trunk R. Co. v. Wellman*, 143 U.S. 339, 345 (1892), rather than merely abstract, conjectural or hypothetical. *See Los Angeles v. Lyons*, 461 U.S. 95, 101-02 (1983). The injury does not have to be substantial; "an 'identifiable trifle' will suffice." *Public Interest Research Group of New Jersey, Inc. v. Powell Duffryn Terminals, Inc.*, 913 F.2d 64, 71 (1990) (hereinafter "*Powell Duffryn*") (*quoting United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 689 n. 14 (1973)). For example, an injury that harms the aesthetic and recreational interests of a plaintiff has been held to constitute a sufficient injury-in-fact to support standing. *Sierra Club v. Morton*, 405 U.S. 727, 735 (1972). In another instance, the Court of Appeals for the

Second Circuit has held that an affidavit stating that an environmental group member had driven over a polluted body of water and was offended at its appearance stated a sufficient injury to justify standing. *See Friends of the Earth v. Consolidated Rail Corp.*, 768 F.2d 57, 61 (2d Cir. 1985).

A plaintiff is not required to show causation with "absolute scientific rigor." *Powell Duffryn*, 913 F.2d at 72. Rather, a defendant's conduct need only be "fairly traceable" to the alleged injury to the plaintiff. *Id.; Whitmore*, 495 U.S. at 155, 110 S.Ct. 1717 (*citing Simon v. Eastern Kentucky Welfare Rights Organization*, 426 U.S. 26, 38 (1976)). This inquiry basically asks the following question; Is there a "substantial likelihood that defendants conduct caused plaintiff's harm[?]" *Powell Duffryn*, 913 F.2d at 72 (*citing Duke Power Co. v. Carolina Environmental Study Group, Inc.*, 438 U.S. 59, 75 n. 20 (1978)).

A plaintiff must also demonstrate that a favorable decision will redress the alleged injury. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561, 112 S.Ct. 2130, 119 L.Ed.2d 351 (1992); *Whitmore*, 495 U.S. at 155 (*citing Simon v. Eastern Kentucky Welfare Rights Organization*, 426 U.S. 26, 41 (1976)). This inquiry focuses on whether the plaintiff will "benefit in a tangible way from the court's intervention." *Warth*, 422 U.S. at 508. Said differently, the redressability prong "focuses on the connection between the plaintiff's injury and the judicial relief sought." *Powell Duffryn*, 913 F.2d at 73 (*citing Allen v. Wright*, 468 U.S. 737, 753 n. 19 (1984)).

Even allegations of possible future injury can justify standing. However, the threatened injury must be immediate and impending to satisfy the requirements of Art. III. *Whitmore*, 495 U.S. at 158 (*citing Babbitt v. Farm Workers*, 442 U.S. 289, 298 (1979)). In *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, an environmental group challenged the Interstate Commerce

Commission's decision to apply a surcharge on railroad freight rates, claiming that ICC's action would:

> cause increased use of nonrecyclable goods as compared to recyclable goods, thus resulting in the need to use more natural resources to produce such goods, some of which resources might be taken from the Washington area, and resulting in more refuse that might be discarded in national parks in the Washington area.

SCRAP, 412 U.S. at 688. The group members alleged that this would cause them to suffer "economic, recreational and aesthetic harm." *SCRAP*, 412 U.S. at 678. The Supreme Court found standing in this case, observing that the SCRAP members stated "specific and perceptible harm sufficient to survive a motion to dismiss for lack of standing." *SCRAP*, 412 U.S. at 679. While this holding has been characterized as the "outer limit of the law," it has not, to date, been overruled. *See Whitmore*, 495 U.S. at 159.

C. Associational Standing.

An association or organization's standing to initiate suit on behalf of its members exists "when [1] its members would otherwise have standing to sue in their own right, [2] the interests at stake are germane to the organization's purpose, and [3] neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." *Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc.*, 528 U.S. 167, 181 (2000) (*citing Hunt v. Washington State Apple Advertising Comm'n*, 432 U.S. 333, 343 (1977)). An association can assert standing "[e]ven in the absence of injury to itself" as long as the individual members or individuals that possess the "indicia of membership" would individually have a

justiciable case. *Warth*, 422 U.S. at 511; *Hunt*, 432 U.S. at 343-44.

D. Analysis of whether **Interfaith and its members have standing.**

The first inquiry in determining whether an association, such as Interfaith, has standing to sue on behalf of its members requires this Court to assess whether Interfaith members "would otherwise have standing to sue in their own right." *Friends of the Earth, Inc.*, 528 U.S. at 181. This requires the Court to ascertain if Plaintiffs have suffered an injury that is fairly traceable to Defendants' alleged conduct and capable of being fairly redressed by a favorable decision by this Court. *Valley Forge Christian College*, 454 U.S. at 472.

Contrary to Defendant Honeywell's proffered arguments, Interfaith has not merely asserted an "abstract question of wide public significance" or a "generalized grievance." *Valley Forge Christian College*, 454 U.S. at 475; *Flast v. Cohen*, 392 U.S. 83, 106 (1968). Plaintiff's have asserted real and imminently threatening environmental concerns that affect their health, aesthetic, recreational and environmental interests. The Supreme Court has held that "aesthetic and environmental well-being, like economic well-being, are important ingredients of the quality of life in our society, and the fact that particular environmental interests are shared by the many rather than the few does not make them less deserving of legal protection through the judicial process." *Sierra Club*, 405 U.S. at 734. Plaintiffs' assert that they are particularly affected by chromium contamination at the Site. While this presents a general concern for all residents in Hudson County, Plaintiffs' claim to be specifically affected by Defendant's alleged failure to fully remediate the Site. Case law favors Plaintiffs on this issue.

In *Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc.*, Plaintiffs were environmental groups that brought a citizen suit against Laidlaw Environmental Services (TOC), Inc. ("Laidlaw") alleging a failure to comply with a National Pollutant Discharge Elimination System permit obtained under the Clean Water Act, 33 U.S.C. 11341(a)(1), by permitting mercury to discharge into the North Tyger River in South Carolina. *Friends of the Earth, Inc.*, 528 U.S. at 175-76. Laidlaw argued that Plaintiffs lacked standing because the "organizations failed to show that any of their members had sustained or faced the threat of any injury in fact from Laidlaw's activities." *Id.* at 181.

In contrast, the Supreme Court noted a member of one of the plaintiff organizations, Kenneth Lee Curtis,

> averred ... that he lived a half-mile from Laidlaw's facility; that he occasionally drove over the North Tyger River, and that it looked and smelled polluted; and that he would like to fish, camp, swim and picnic in and near the river ... as he did when he was a teenager, but would not do so because he was concerned that the water was polluted by Laidlaw's discharges.

Id. at 181-82. Another member of the plaintiff organizations, Angela Patterson, described that she:

> [L]ived two miles from the facility; that before Laidlaw operated the facility, she picnicked, walked, birdwatched, and waded in and along the North Tyger River because of the natural beauty of the area; that she no longer engaged in these activities in or near the river because she was concerned about harmful effects from discharged pollutants; and that she and her husband would like to purchase a home near the river but did not

> intend to do so, in part, because of Laidlaw's discharges.

Id. at 182. Another member, Linda Moore, stated that she lived twenty miles away from the Laidlaw site and that she would like to use the North Tyger River and land near it for recreational purposes, but opts not to do so because of her concern about Laidlaw's discharges. *Id.* Another member, Norman Sharp, claimed that he regularly canoed about forty miles downstream from the Laidlaw facility and would like to canoe "closer to Laidlaw's discharge point, but did not do so because he was concerned that the water contained harmful pollutants." *Id.* at 183.

The Supreme Court found that these statements raised "reasonable concerns about the effects of [Laidlaw's] ... discharges" and that the affidavits described how Laidlaw's conduct "directly affected those affiants' recreational, aesthetic, and economic interests." *Id.* at 183-84. Justice Ginsburg further articulated that the mere fact that the group members made conditional statements did not render their affidavits speculative. *Id.* at 184. In fact, the seven justice majority saw,

> nothing improbable about the proposition that a company's continuous and pervasive illegal discharges of pollutants into a river would cause nearby residents to curtail their recreational use of that waterway and would subject them to other economic and aesthetic harms.

Id. Based on this reasoning the Supreme Court held that plaintiffs' had standing to bring suit.

In *Public Interest Research Group of New Jersey, Inc. ("PIRG") v. Powell Duffryn Terminals Inc. ("Powell Duffryn"),* 913 F.2d 64 (1990), the Third Circuit also addressed a permit violation under the Clean Water Act. Powell Duffryn was accused of violating their permit 386 times over the course of a six-year period by allowing

petroleum spillage to discharge into the Kill Van Kull, a navigable body of water near Bayonne, New Jersey. *Powell Duffryn,* 913 F.2d at 69-71. As in *Laidlaw,* members of the plaintiff organizations stated in affidavits that they reside, hike, jog, or bicycle near Kill Van Kull. In addition, they further stated that they would boat, fish or swim in Kill Van Kull if it were cleaner. *Id.* at 71. The Third Circuit found that these allegations satisfied the requirements of Article III standing. In so holding, the Court reiterated the Supreme Court's statement in *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)* that an "identifiable trifle" is sufficient to meet the injury-in-fact requirement and found that the injuries in this case were not trifles, but rather legitimate injuries to the aesthetic and recreational interests of PIRG and its members. *Id.*

As in *Laidlaw* and *Powell Duffryn,* Interfaith members have also asserted that they have suffered aesthetic, recreational and environmental injuries. Each of the individual plaintiffs in this suit, as well as other members not named in this action, resides near the Site. Interfaith members also visit businesses near the site or have visited businesses previously located on the Site. For example, Lawrence Baker lives less than two miles away from the Site and has worked near the Site for about fifty years. Baker Aff., ¶ 1. As of the filing of the present motion in June 2000, Baker still worked in the area. *Id.,* ¶ 10. Baker avers to witnessing a "greenish/yellowish ooze" on the site. *Id.,* ¶ 4. Baker further stated that the Site is "disgraceful" in appearance and a "blight to the neighborhood." *Id.,* ¶¶ 8, 12. Baker expresses a concern for his health in being exposed to the Site. *Id.,* ¶ 11. In fact, Baker was hospitalized prior to the filing of this motion for kidney failure. Third Affidavit of Lawrence Baker, ¶ 10.

Other members have also expressed concerns. Herring avers that she too lives near the Site and shops at the Pathmark supermarket near the Site. Second Affidavit of

Martha Webb Herring ("Second Herring Aff."), ¶¶ 2, 5. She also fears for her health. Second Herring Aff., ¶ 8. Navas lives less than one-half of a mile from the Site. Navas Aff., ¶ 1. Navas avers that she is concerned about her health and the health of her family due to the chromium at the Site. Navas Aff., ¶ 6. Navas also claims that she occasionally walks and bicycles near the "unattractive" Site along the Hackensack River and would do so more often if the area were cleaner. *See id.*, ¶¶ 7-8. Navas was diagnosed with sarcoidosis shortly after moving into her residence near the Site in 1991. Sarcoidosis is a rare form of psoriasis that can be caused or exacerbated by the presence of irritative and allergic substances in her environment. Navas Aff., ¶ 3. While Navas did not state that she is specifically concerned about how the chromium at the Site affects her condition, she did express a general concern for her health, which may potentially be impacted upon by the presence of chromium near her home and in areas she frequents. Ms. Webb also fears for her health in light of her residential proximity to the Site. *See* Amended Complaint, ¶ 30.

Lastly, Clark states in an affidavit dated January 12, 2000 that he lives within one quarter mile of the Site and that he shops regularly at the Pathmark supermarket near the Site. Affidavit of Reverend Winston Clarke ("Clarke Aff."), ¶¶ 2-3. Clarke asserts that he worries about the effects of the Site's chromium contamination on his health. Clarke Aff., ¶ 5. He further states that he avoids the nearby river "because it is unpleasant to look at and I am afraid that it may be harmful to my health." Clarke Aff., ¶ 7.

The individual plaintiffs in this case, each members of Interfaith or individuals with sufficient indicia of membership to be treated as members by this Court, all have stated injuries similar to those found to suffice for standing in both *Laidlaw* and *Powell Duffryn*. The individual members of Interfaith live near the Site, consider the Site to be a blight on the neighborhood, and some have even

expressed that contamination of the Site has curtailed their recreational and aesthetic interest in the Site. As far back as 1988, an NJDEP Directive found that the chromium contamination at the Site posed an ongoing risk to humans and created a "substantial risk of imminent damage to public health and safety and imminent and severe damage to the environment." *In the Matter of the Hudson County Chromate Chemical Production Waste Sites and Allied-Signal [sic] Inc.; PPG Industries Inc.; Occidental Chemical Corp.; and Maxus Energy Corp.*, ¶ 18. A prior Opinion in this matter by the Honorable Alfred J. Lechner, dated April 25, 1996, further found that:

> In the Amended Complaint, Plaintiffs allege "[t]he hazardous waste, including chromium-bearing waste, at the [Site], may present an imminent and substantial endangerment to health or the environment." Amended Complaint, ¶ 73. *Chromium-bearing waste has been and continues to be present at the Site. Id., ¶¶ 46, 61, 73. The Amended Complaint is based on actual and long-standing contamination which may be presenting a harm to human life and the environment.*

Interfaith Community Organization v. AlliedSignal, Inc., 928 F.Supp. 1339, 1349 (D.N.J. 1996) (emphasis added). In both 1988 and 1996, the Site was found to pose a threat of continuous environmental harm. Plaintiffs allege that Defendants have failed to adequately contain this harm, even though Honeywell, through an administrative consent order, has agreed to do so. Given the allegations of Interfaith's members and the present contamination of the Site, this Court finds that Interfaith's members have presented sufficient facts to show that they are suffering an actual injury at the present time or have at least stated concerns of specific and perceptible future harm sufficient satisfy the

injury-in-fact requirement of constitutional standing. *See SCRAP*, 412 U.S. at 679.

The second standing requirement demands that Plaintiffs' demonstrate that Defendants' conduct (failure to conduct a full remediation effort at the Site) is fairly traceable to Plaintiffs' stated or threatened injuries. Each of the individual Plaintiffs have stated that they are concerned for their health in light of their proximity to the Site. Plaintiffs Navas and Baker have each suffered from conditions that could have been caused or may have been exacerbated by the presence of chromium in their environment. Furthermore, each of the individual Plaintiffs has claimed that the Site either has prevented or curtailed their recreational or aesthetic interest in the Site. These injuries are all fairly traceable to Honeywell's alleged failure to make the Site environmentally safe. *See Simon*, 426 U.S. at 38.

The redressability prong of the test for standing can be dealt with in short order. If Plaintiffs earn a favorable decision from this Court, Honeywell would be required to conduct complete remediation efforts, which would resolve Plaintiffs' health, aesthetic and economic concerns. An adequate cleanup of the Site would also make a sufficiently large tract of land available for Interfaith's affordable housing proposal in Hudson County. These results would surely "benefit" Interfaith and its members "in a tangible way." *Warth*, 422 U.S. at 508. Therefore, this Court finds that the redressability prong is also satisfied here. Accordingly, this Court finds that Interfaith members "would otherwise have standing to sue in their own right" and thus have satisfied the first prong of the test for associational standing. *See Friends of the Earth, Inc.*, 528 U.S. at 181.

Next, the Court must assess whether the interests at stake in this litigation are "germane" to Interfaith's organizational purpose. *Friends of the Earth, Inc.*, 528 U.S. at 181. According to the President of Interfaith, Geoffrey

Curtiss, the purpose of Interfaith is to involve "church leaders in the public and political life of their communities and to improve the quality of life in Hudson County." Curtiss Aff., ¶ 1. One manner in which Interfaith sought to effectuate this purpose was to build affordable housing in Hudson County. The unavailability of the Site for this purpose has thwarted this effort. The health of Interfaith's members and the ability to create housing opportunities within Hudson County and on the Site in particular are all related or germane to the purpose of improving the quality of life in Hudson County. As a result, Plaintiffs' have satisfied the second element of the test for associational standing.

Lastly, the Court must determine if Interfaith's requested relief "requires the participation of individual members in the lawsuit." *Friends of the Earth, Inc.*, 528 U.S. at 181. It does not. Interfaith wishes to have Honeywell clean up the Site, not provide individual relief to any of its members. As a result, Interfaith can capably represent the interests of the organization without the participation of its individual members. Because Interfaith has met all of the requirements for associational standing, this Court finds that Interfaith as an association/organization, as well as the individual Plaintiffs named in this case, all have standing to pursue their RCRA claim against the Defendants. Accordingly, Honeywell's motion to dismiss for lack of standing is denied and Interfaith's cross-motion for partial summary judgment on the issue of whether they have standing is **granted.**

II. Joint Motion by Plaintiff Interfaith and the Grace Defendants as to Honeywell's Liability under RCRA.

A. Summary Judgment.

The present motion is for partial summary judgment under Rule 56(d)[3] of the Federal Rules of Civil Procedure. Summary judgment eliminates unfounded claims without recourse to a costly and lengthy trial. *See Celotex Corp. v. Catrett,* 477 U.S. 317, 327, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). Under Federal Rule of Civil Procedure 56(c), summary judgment is proper where "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed.R.Civ.P. 56(c). The burden of showing that no genuine issue of material fact exists rests initially on the moving

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[3] The full text of Federal Rule of Civil Procedure 56(d) reads:

> If on motion under this rule judgment is not rendered upon the whole case or for all the relief asked and a trial is necessary, the court at the hearing of the motion, by examining the pleadings and the evidence before it and by interrogating counsel, shall if practicable ascertain what material facts exist without substantial controversy and what material facts are actually and in good faith controverted. It shall thereupon make an order specifying the facts that appear without substantial controversy, including the extent to which the amount of damages or other relief is not in controversy, and directing such further proceedings in the action as are just. Upon the trial of the action the facts so specified shall be deemed established, and the trial shall be conducted accordingly. Motions for partial summary judgment serve "the purpose of speeding up litigation by eliminating before trial matters wherein there is no genuine issue of fact." Advisory Committee Notes to the 1946 Amendment to Rule 56(d).

party. *See Celotex,* 477 U.S. at 323. A litigant may discharge this burden by exposing "the absence of evidence to support the nonmoving party's case." *Id.* at 325. However, this effort requires more than "simply show[ing] that there is some metaphysical doubt as to material facts." *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.,* 475 U.S. 574, 586 (1986). In evaluating a summary judgment motion a court must view all evidence in the light most favorable to the nonmoving party. *See Matsushita Elec. Indus. Co., Ltd.,* 475 U.S. at 587; *Abraham v. Raso,* 183 F.3d 279, 287 (3d Cir. 1999) (*citing Boyle v. County of Allegheny Pa.,* 139 F.3d 386, 393 (3d Cir. 1998)); *Goodman v. Mead Johnson & Co.,* 534 F.2d 566, 573 (3d Cir. 1976). The Court's role is not "to weigh the evidence and determine the truth of the matter, but to determine whether there is a genuine issue of fact for trial." *Anderson,* 477 U.S. at 248-49, 106 S.Ct. 2505; *Abraham,* 183 F.3d at 287.

Once the moving party has made a properly supported motion for summary judgment, the burden shifts to the non-moving party to "set forth specific facts showing that there is a genuine issue for trial." Fed.R.Civ.P. 56(e); *Anderson v. Liberty Lobby, Inc.,* 477 U.S. 242, 247-48, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). The substantive law determines which facts are material. *Id.* at 248. "Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment." *Id.* No issue for trial exists unless the non-moving party can demonstrate sufficient evidence favoring it, such that a reasonable jury could return a verdict in that party's favor. *See id.* at 249.

B. Liability under RCRA

Under RCRA, liability can be established by meeting the requirements of Sections 7002(a)(1)(B) and Section 7003. For the purposes of the joint motion by Interfaith and the Grace Defendants, the liability inquiry requires a four-

part analysis of whether Honeywell; (1) has contributed or is contributing to, (2) the past or present handling, storage, treatment, transportation, or disposal of, (3) any solid or hazardous waste that, (4) presents an imminent and substantial endangerment to health or the environment. 42 U.S.C. § 6972(a)(1)(B); 3 S. Cooke, The Law of Hazardous Waste, § 15.01[3][a] at 15-6 (2001).

1. The "has contributed or is contributing to" the "past or present handling, storage, treatment, transportation, or disposal of" Requirement.

In deciding this partial summary judgment motion, the Court will assume Defendant Honeywell, as successor in interest to Mutual, has contributed or is contributing to previously stored, treated, transported or disposed of hazardous waste at the Roosevelt Drive In Site. This Court observes that these requirements are very broad and encompass practically any conduct relating to hazardous waste by practically any individual or entity. Accordingly, for the purposes of this motion, Honeywell falls within these requirements.

2. The "solid or hazardous waste" Requirement.

RCRA provides statutory definitions for the terms solid waste and hazardous waste. Section 1004(27) of RCRA defines the phrase "solid waste" as:

> [A]ny garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in

> domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of Title 33, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923) 42 U.S.C. § 2011 *et seq.*

42 U.S.C. § 6903(27). Section 1004(5) of RCRA further defines the term "hazardous waste:"

> [A] solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may--
> (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
> (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

42 U.S.C. § 6903(5).

Honeywell, in its Response to Plaintiffs' and The Grace Defendants' Statement of Material Uncontroverted Facts Regarding Their Motion For Partial Summary Judgment on the RCRA Claims ("Honeywell 56.1 Response"), admitted that chromium is a solid and hazardous form of waste within the meaning of RCRA. Further, courts have found that chromium, particularly hexavalent chromium, is a hazardous substance under RCRA. *See, e.g., U.S. v. Power Engineering Co.,* 10 F.Supp.2d 1145, 1157-58 (D.Colo. 1998), *affirmed* by 191 F.3d 1224, 1231 (10th Cir. 1999), *cert. denied,* 529 U.S. 1086 (2000) (finding that hexavalent chromium is clearly a form of hazardous waste and also a form of solid waste under RCRA and Colorado regulations); *Steel Manufacturers Ass'n v. E.P.A.,* 27 F.3d

642, 645 (D.C.Cir. 1994) (electric arc furnace dust is considered to be a form of hazardous waste by the EPA because, in part, it contains hexavalent chromium); 40 C.F.R. § 261.24 (Under RCRA, the EPA has classified waste that contains five parts per million (ppm) or more of chromium as hazardous).

It is undisputed that the soil at the Site has been assessed at levels as high at 17,900 ppm. Interfaith and the Grace Defendant Rule 56.1 Statement of Undisputed Material Facts ("Interfaith/Grace 56.1 Statement"), ¶ 5(b); Honeywell 56.1 Response, ¶5(b). The groundwater contains concentrations of chromium measured at 708,000 parts per billion (ppb). Interfaith/ Grace 56.1 Statement, ¶ 5(c); Honeywell 56.1 Response, ¶5(c). The surface water at the Site contains levels of chromium measured at 19,900 ppb. Interfaith/Grace 56.1 Statement, ¶ 5(d); Honeywell 56.1 Response, ¶5(d). Consequently, for the purposes of this partial summary judgment motion, this Court finds that chromium is a form of solid or hazardous waste under RCRA.

3. The "imminent and substantial endangerment to health or the environment" Requirement.

The final element of a RCRA citizen suit under Section 7002(a)(1)(B) requires a showing that the solid or hazardous waste at issue may present an imminent and substantial endangerment. Although this analysis is fact-specific, compliance (or noncompliance) with federal or state environmental standards is a determinative factor in assessing whether a particular form of contamination presents the possibility of imminent and substantial endangerment. 3 S. Cooke, The Law of Hazardous Waste, § 15.01[3][e] at 15-11, 15-12 (2001). It should be noted that only the risk of harm, rather than actual harm, must be imminent; In fact, actual harm is not even required under RCRA. 3 S. Cooke, The Law of Hazardous Waste,

§ 15.01[3][e] at 15-11 n. 45-47. (2001) (*citing Meghrig v. Kentucky Fried Chicken Western, Inc.*, 516 U.S. 479, 486 (1996) (imminence "implies that there must be a threat which is present now, although the impact of the threat may not be felt until later"); *Dague v. City of Burlington*, 935 F.2d 1343, 1356 (2d Cir. 1991), *rev'd in part on other grounds*, 505 U.S. 557 (1992); *United States v. Conservation Chem. Co.*, 619 F.Supp. 162, 193 (W.D.Mo. 1985)).

A review of the submissions in this case persuades this Court that the issue of whether there exists an imminent and substantial endangerment to health or the environment in Hudson County because of the Site or whether there is a present risk of such imminent and substantial harm is question of fact that is in dispute in this case. Essentially, Interfaith, the Grace Defendants and Honeywell disagree as to whether the Interim Remedial Measures taken by Honeywell are sufficient under RCRA. Honeywell asserts it has eliminated any genuine risk to human health by installing and maintaining a soil cap, a concrete slab, and asphalt on the Site. Interfaith and the Grace Defendants, on the other hand, contend that these measures have proved ineffective and that Honeywell's inaction is causing a present and very real environmental threat to human health in Hudson County. In light of this factual dispute, this Court finds that Interfaith and the Grace Defendants' motion for partial summary judgment declaring Honeywell liable under RCRA must be denied and these issues permitted to proceed to trial.

CONCLUSION

For the foregoing reasons, Honeywell's motion to dismiss Count One of Interfaith's Amended Complaint for lack of standing under RCRA is **denied.** Interfaith's cross motion for partial summary judgment regarding Plaintiffs standing to bring a citizen suit under RCRA is **granted.** Interfaith and the Grace Defendants motion for partial summary judgment on the issue of Honeywell's liability

under RCRA is **denied.** An Order accompanies this Opinion.

ORDER

This matter having come before the Court on motions by Defendant, Honeywell International, Inc. to dismiss Count One of Plaintiff, Interfaith Community Organization's Amended Complaint for lack of standing under section 7002, 42 U.S.C. § 6972 of the Resource Recovery Conservation Act ("RCRA"); and on cross-motion by Plaintiff, Interfaith Community Organization for partial summary judgment on the validity of Plaintiff's standing to bring a citizen suit under section 7002, 42 U.S.C. § 6972 of RCRA; and on motion by Defendants W.R. Grace & Company, Ecarg, Inc., and W.R. Grace, Ltd. and Plaintiff Interfaith Community Organization for partial summary judgment as to Honeywell International, Inc.'s liability under section 7002, 42 U.S.C. § 6972 of RCRA; and the Court having thoroughly reviewed the submissions in support of and in opposition to each of the three motions mentioned above; and for the reasons discussed in the Opinion of this Court filed herewith; and for good cause shown,

IT IS ON THIS 12th DAY OF MARCH 2002

ORDERED that Defendant Honeywell International, Inc.'s motion to dismiss Count One of Plaintiff's Amended Complaint for lack of standing is **denied**; and it is further

ORDERED that Plaintiff Interfaith Community Organization's motion for partial summary judgment on the issue of standing to bring a citizen suit under RCRA is **granted**; and it is further

ORDERED that the joint motion by Interfaith Community Organization and W.R. Grace & Company, Ecarg, Inc., and W.R. Grace, Ltd. seeking partial summary judgment against Honeywell International, Inc. as to liability under RCRA is **denied.**

STATUTORY AND REGULATORY PROVISIONS INVOLVED

Resource Conservation and Recovery Act

Section 7002 [42 U.S.C.§ 6972]

Citizen suits

(a) In general.

Except as provided in subsection (b) or (c) of this section, any person may commence a civil action on his own behalf—

(1) (A) against any person (including (a) the United States, and (b) any other governmental instrumentality or agency, to the extent permitted by the eleventh amendment to the Constitution) who is alleged to be in violation of any permit, standard, regulation, condition, requirement, prohibition, or order which has become effective pursuant to this chapter; or

(B) against any person, including the United States and any other governmental instrumentality or agency, to the extent permitted by the eleventh amendment to the Constitution, and including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment; or

(2) against the Administrator where there is alleged a failure of the Administrator to perform any act or duty

under this chapter which is not discretionary with the Administrator.

Any action under paragraph (a)(1) of this subsection shall be brought in the district court for the district in which the alleged violation occurred or the alleged endangerment may occur. Any action brought under paragraph (a)(2) of this subsection may be brought in the district court for the district in which the alleged violation occurred or in the District Court of the District of Columbia. The district court shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce the permit, standard, regulation, condition, requirement, prohibition, or order, referred to in paragraph (1)(A), to restrain any person who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste referred to in paragraph (1)(B), to order such person to take such other action as may be necessary, or both, or to order the Administrator to perform the act or duty referred to in paragraph (2), as the case may be, and to apply any appropriate civil penalties under section 3008(a) and (g).

(b) Actions prohibited

(1) No action may be commenced under subsection (a)(1)(A) of this section—

(A) prior to 60 days after the plaintiff has given notice of the violation to—

(i) the Administrator;

(ii) the State in which the alleged violation occurs; and

(iii) to any alleged violator of such permit, standard, regulation, condition, requirement, prohibition, or order, except that such action may be brought immediately after such notification in the case of an action under this section respecting a violation of subctitle C of this Act; or

(B) if the Administrator or State has commenced and is diligently prosecuting a civil or criminal action in a court of the United States or a State to require compliance with such permit, standard, regulation, condition, requirement, prohibition, or order. In any action under subsection (a)(1)(A) in a court of the United States, any person may intervene as a matter of right.

(2)(A) No action may be commenced under subsection (a)(1)(B) of this section prior to ninety days after the plaintiff has given notice of the endangerment to—

(i) the Administrator;

(ii) the State in which the alleged endangerment may occur;

(iii) any person alleged to have contributed or to be contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste referred to in subsection (a)(1)(B) of this section, except that such action may be brought immediately after such notification in the case of an action under this section respecting a violation of subtitle C of this Act.

(B) No action may be commenced under subsection (a)(1)(B) of this section if the Administrator, in order to restrain or abate acts or conditions which may have

contributed or are contributing to the activities which may present the alleged endangerment—

(i) has commenced and is diligently prosecuting an action under section 6973 of this title or under section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 [42 U.S.C. 9606],

(ii) is actually engaging in a removal action under section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 [42 U.S.C. 9604];

(iii) has incurred costs to initiate a Remedial Invcstigation and Feasibility Study under section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 [42 U.S.C. 9604] and is diligently proceeding with a remedial action under that Act [42 U.S.C. 9601 et seq.]; or

(iv) has obtained a court order (including a consent decree) or issued an administrative order under section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 or section 7003 of this Act pursuant to which a responsible party is diligently conducting a removal action, Remedial Investigation and Feasibility Study (RIFS), or proceeding with a remedial action.

In the case of an administrative order referred to in clause (iv), actions under subsection (a)(1)(B) of this section are prohibited only as to the scope and duration of the administrative order referred to in clause (iv).

(C) No action may be commenced under subsection (a)(1)(B) of this section if the State, in order to restrain or abate acts or conditions which may have contributed or are contributing to the activities which may present the alleged endangerment—

(i) has commenced and is diligently prosecuting an action under subsection (a)(1)(B) of this section;

(ii) is actually engaging in a removal action under section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980; or

(iii) has incurred costs to initiate a Remedial Investigation and Feasibility Study under section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 and is diligently proceeding with a remedial action under that Act

(D) No action may be commenced under subsection (a)(1)(B) of this section by any person (other than a State or local government) with respect to the siting of a hazardous waste treatment, storage, or a disposal facility, nor to restrain or enjoin the issuance of a permit for such facility.

(E) In any action under subsection (a)(1)(B) of this section in a court of the United States, any person may intervene as a matter of right when the applicant claims an interest relating to the subject of the action and he is so situated that the disposition of the action may, as a practical matter, impair or impede his ability to protect that interest, unless the Administrator or the State shows

that the applicant's interest is adequately represented by existing parties.

(F) Whenever any action is brought under subsection (a)(1)(B) of this section in a court of the United States, the plaintiff shall serve a copy of the complaint on the Attorney General of the United States and with the Administrator.

(c) Notice

No action may be commenced under paragraph (a)(2) of this section prior to sixty days after the plaintiff has given notice to the Administrator that he will commence such action, except that such action may be brought immediately after such notification in the case of an action under this section respecting a violation of subtitle C of this Act. Notice under this subsection shall be given in such manner as the Administrator shall prescribe by regulation. Any action respecting a violation under this chapter may be brought under this section only in the judicial district in which such alleged violation occurs.

(d) Intervention.

In any action under this section the Administrator, if not a party, may intervene as a matter of right.

(e) Costs.

The court, in issuing any final order in any action brought pursuant to this section or section 7006 may award costs of litigation (including reasonable attorney and expert witness fees) to the prevailing or substantially prevailing party, whenever the court determines such an award is appropriate. The court may, if a temporary restraining order or preliminary injunction is sought, require the filing of a bond

or equivalent security in accordance with the Federal Rules of Civil Procedure.

(f) Other rights preserved.

Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any standard or requirement relating to the management of solid waste or hazardous waste, or to seek any other relief (including relief against the Administrator or a State agency).

(g) Transporters.

A transporter shall not be deemed to have contributed or to be contributing to the handling, storage, treatment, or disposal, referred to in subsection (a)(1)(B) of this section taking place after such solid waste or hazardous waste has left the possession or control of such transporter, if the transportation of such waste was under a sole contractual arrangement arising from a published tariff and acceptance for carriage by common carrier by rail and such transporter has exercised due care in the past or present handling, storage, treatment, transportation and disposal of such waste.

Comprehensive Environmental Response Compensation and Liability Act of 1980

Section 105 [42 U.S.C. § 9605]

National contingency plan

(a) Revision and republication

Within one hundred and eighty days after December 11, 1980, the President shall, after notice and opportunity for public comments, revise and republish the national contingency plan for the removal of oil and hazardous substances, originally prepared and published pursuant to section 1321 of Title 33, to reflect and effectuate the responsibilities and powers created by this chapter, in addition to those matters specified in section 1321(c)(2) of Title 33. Such revision shall include a section of the plan to be known as the national hazardous substance response plan which shall establish procedures and standards for responding to releases of hazardous substances, pollutants, and contaminants, which shall include at a minimum:

(1) methods for discovering and investigating facilities at which hazardous substances have been disposed of or otherwise come to be located;

(2) methods for evaluating, including analyses of relative cost, and remedying any releases or threats of releases from facilities which pose substantial danger to the public health or the environment;

(3) methods and criteria for determining the appropriate extent of removal, remedy, and other measures authorized by this chapter;

(4) appropriate roles and responsibilities for the Federal, State, and local governments and for interstate and nongovernmental entities in effectuating the plan;

(5) provision for identification, procurement, maintenance, and storage of response equipment and supplies;

(6) a method for and assignment of responsibility for reporting the existence of such facilities which may be located on federally owned or controlled properties and any releases of hazardous substances from such facilities;

(7) means of assuring that remedial action measures are cost-effective over the period of potential exposure to the hazardous substances or contaminated materials;

(8)(A) criteria for determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable taking into account the potential urgency of such action, for the purpose of taking removal action. Criteria and priorities under this paragraph shall be based upon relative risk or danger to public health or welfare or the environment, in the judgment of the President, taking into account to the extent possible the population at risk, the hazard potential of the hazardous substances at such facilities, the potential for contamination of drinking water supplies, the potential for direct human contact, the potential for destruction of sensitive ecosystems, the damage to natural resources which may affect the human food chain and which is associated with any release or threatened release, the contamination or potential contamination of the ambient air which is associated with the release or threatened release, State preparedness to assume State costs and responsibilities, and other appropriate factors;

(B) based upon the criteria set forth in subparagraph (A) of this paragraph, the President shall list as part of the plan national priorities among the known releases or threatened releases throughout the United States and shall revise the list no less often than annually. Within one year after December 11, 1980, and annually thereafter, each State shall establish and submit for consideration by the President priorities for remedial action among known releases and potential releases in that State based upon the criteria set forth in subparagraph (A) of this paragraph. In assembling or revising the national list, the President shall consider any priorities established by the States. To the extent practicable, the highest priority facilities shall be designated individually and shall be referred to as the "top priority among known response targets", and, to the extent practicable, shall include among the one hundred highest priority facilities one such facility from each State which shall be the facility designated by the State as presenting the greatest danger to public health or welfare or the environment among the known facilities in such State. A State shall be allowed to designate its highest priority facility only once. Other priority facilities or incidents may be listed singly or grouped for response priority purposes;

(9) specified roles for private organizations and entities in preparation for response and in responding to releases of hazardous substances, including identification of appropriate qualifications and capacity therefor and including consideration of minority firms in accordance with subsection (f) of this section; and

(10) standards and testing procedures by which alternative or innovative treatment technologies can be determined to

be appropriate for utilization in response actions authorized by this chapter.

The plan shall specify procedures, techniques, materials, equipment, and methods to be employed in identifying, removing, or remedying releases of hazardous substances comparable to those required under section 1321(c)(2)(F) and (G) and (j)(1) of Title 33. Following publication of the revised national contingency plan, the response to and actions to minimize damage from hazardous substances releases shall, to the greatest extent possible, be in accordance with the provisions of the plan. The President may, from time to time, revise and republish the national contingency plan.

(b) Revision of plan

Not later than 18 months after the enactment of the Superfund Amendments and Reauthorization Act of 1986 [October 17, 1986], the President shall revise the National Contingency Plan to reflect the requirements of such amendments. The portion of such Plan known as "the National Hazardous Substance Response Plan" shall be revised to provide procedures and standards for remedial actions undertaken pursuant to this chapter which are consistent with amendments made by the Superfund Amendments and Reauthorization Act of 1986 relating to the selection of remedial action.

(c) **Hazard ranking system**

(1) **Revision**

Not later than 18 months after October 17, 1986, and after publication of notice and opportunity for submission of comments in accordance with section 553 of Title 5, the

President shall by rule promulgate amendments to the hazard ranking system in effect on September 1, 1984. Such amendments shall assure, to the maximum extent feasible, that the hazard ranking system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review. The President shall establish an effective date for the amended hazard ranking system which is not later than 24 months after October 17, 1986. Such amended hazard ranking system shall be applied to any site or facility to be newly listed on the National Priorities List after the effective date established by the President. Until such effective date of the regulations, the hazard ranking system in effect on September 1, 1984, shall continue in full force and effect.

(2) **Health assessment of water contamination risks**

In carrying out this subsection, the President shall ensure that the human health risks associated with the contamination or potential contamination (either directly or as a result of the runoff of any hazardous substance or pollutant or contaminant from sites or facilities) of surface water are appropriately assessed where such surface water is, or can be, used for recreation or potable water consumption. In making the assessment required pursuant to the preceding sentence, the President shall take into account the potential migration of any hazardous substance or pollutant or contaminant through such surface water to downstream sources of drinking water.

(3) **Reevaluation not required**

The President shall not be required to reevaluate, after October 17, 1986, the hazard ranking of any facility which

was evaluated in accordance with the criteria under this section before the effective date of the amendments to the hazard ranking system under this subsection and which was assigned a national priority under the National Contingency Plan.

(4) **New information**

Nothing in paragraph (3) shall preclude the President from taking new information into account in undertaking response actions under this chapter.

(d) **Petition for assessment of release**

Any person who is, or may be, affected by a release or threatened release of a hazardous substance or pollutant or contaminant, may petition the President to conduct a preliminary assessment of the hazards to public health and the environment which are associated with such release or threatened release. If the President has not previously conducted a preliminary assessment of such release, the President shall, within 12 months after the receipt of any such petition, complete such assessment or provide an explanation of why the assessment is not appropriate. If the preliminary assessment indicates that the release or threatened release concerned may pose a threat to human health or the environment, the President shall promptly evaluate such release or threatened release in accordance with the hazard ranking system referred to in paragraph (8)(A) of subsection (a) of this section to determine the national priority of such release or threatened release.

(e) Releases from earlier sites

Whenever there has been, after January 1, 1985, a significant release of hazardous substances or pollutants or

contaminants from a site which is listed by the President as a "Site Cleaned Up To Date" on the National Priorities List (revised edition, December 1984) the site shall be restored to the National Priorities List, without application of the hazard ranking system.

(f) Minority contractors

In awarding contracts under this chapter, the President shall consider the availability of qualified minority firms. The President shall describe, as part of any annual report submitted to the Congress under this chapter, the participation of minority firms in contracts carried out under this chapter. Such report shall contain a brief description of the contracts which have been awarded to minority firms under this chapter and of the efforts made by the President to encourage the participation of such firms in programs carried out under this chapter.

(g) Special study wastes

(1) Application

This subsection applies to facilities--

(A) which as of October 17, 1986, were not included on, or proposed for inclusion on, the National Priorities List; and

(B) at which special study wastes described in paragraph (2), (3)(A)(ii) or (3)(A)(iii) of section 6921(b) of this title are present in significant quantities, including any such facility from which there has been a release of a special study waste.

(2) Considerations in adding facilities to NPL

Pending revision of the hazard ranking system under subsection (c) of this section, the President shall consider each of the following factors in adding facilities covered by this section to the National Priorities List:

(A) The extent to which hazard ranking system score for the facility is affected by the presence of any special study waste at, or any release from, such facility.

(B) Available information as to the quantity, toxicity, and concentration of hazardous substances that are constituents of any special study waste at, or released from such facility, the extent of or potential for release of such hazardous constituents, the exposure or potential exposure to human population and the environment, and the degree of hazard to human health or the environment posed by the release of such hazardous constituents at such facility. This subparagraph refers only to available information on actual concentrations of hazardous substances and not on the total quantity of special study waste at such facility.

(3) Savings provisions

Nothing in this subsection shall be construed to limit the authority of the President to remove any facility which as of October 17, 1986, is included on the National Priorities List from such List, or not to list any facility which as of such date is proposed for inclusion on such list.

(4) Information gathering and analysis

Nothing in this chapter shall be construed to preclude the expenditure of monies from the Fund for gathering and

analysis of information which will enable the President to consider the specific factors required by paragraph (2).

(h) NPL deferral

(1) Deferral to State voluntary cleanups

At the request of a State and subject to paragraphs (2) and (3), the President generally shall defer final listing of an eligible response site on the National Priorities List if the President determines that--

(A) the State, or another party under an agreement with or order from the State, is conducting a response action at the eligible response site--

(i) in compliance with a State program that specifically governs response actions for the protection of public health and the environment; and

(ii) that will provide long-term protection of human health and the environment; or

(B) the State is actively pursuing an agreement to perform a response action described in subparagraph (A) at the site with a person that the State has reason to believe is capable of conducting a response action that meets the requirements of subparagraph (A).

(2) Progress toward cleanup

If, after the last day of the 1-year period beginning on the date on which the President proposes to list an eligible response site on the National Priorities List, the President determines that the State or other party is not making reasonable progress toward completing a response action at

the eligible response site, the President may list the eligible response site on the National Priorities List.

(3) Cleanup agreements

With respect to an eligible response site under paragraph (1)(B), if, after the last day of the 1-year period beginning on the date on which the President proposes to list the eligible response site on the National Priorities List, an agreement described in paragraph (1)(B) has not been reached, the President may defer the listing of the eligible response site on the National Priorities List for an additional period of not to exceed 180 days if the President determines deferring the listing would be appropriate based on--

(A) the complexity of the site;

(B) substantial progress made in negotiations; and

(C) other appropriate factors, as determined by the President.

(4) Exceptions

The President may decline to defer, or elect to discontinue a deferral of, a listing of an eligible response site on the National Priorities List if the President determines that--

(A) deferral would not be appropriate because the State, as an owner or operator or a significant contributor of hazardous substances to the facility, is a potentially responsible party;

(B) the criteria under the National Contingency Plan for issuance of a health advisory have been met; or

(C) the conditions in paragraphs (1) through (3), as applicable, are no longer being met.

Section 121 [42 U.S.C. § 9621]

Cleanup standards

(a) Selection of remedial action

The President shall select appropriate remedial actions determined to be necessary to be carried out under section 9604 of this title or secured under section 9606 of this title which are in accordance with this section and, to the extent practicable, the national contingency plan, and which provide for cost-effective response. In evaluating the cost effectiveness of proposed alternative remedial actions, the President shall take into account the total short- and long-term costs of such actions, including the costs of operation and maintenance for the entire period during which such activities will be required.

(b) General rules

(1) Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances, pollutants, and contaminants is a principal element, are to be preferred over remedial actions not involving such treatment. The offsite transport and disposal of hazardous substances or contaminated materials without such treatment should be the least favored alternative remedial action where practicable treatment technologies are available. The President shall conduct an assessment of permanent solutions and alternative treatment technologies or resource recovery technologies that, in whole

or in part, will result in a permanent and significant decrease in the toxicity, mobility, or volume of the hazardous substance, pollutant, or contaminant. In making such assessment, the President shall specifically address the long-term effectiveness of various alternatives. In assessing alternative remedial actions, the President shall, at a minimum, take into account:

(A) the long-term uncertainties associated with land disposal;

(B) the goals, objectives, and requirements of the Solid Waste Disposal Act [42 U.S.C.A. § 6901 et seq.];

(C) the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents;

(D) short- and long-term potential for adverse health effects from human exposure;

(E) long-term maintenance costs;

(F) the potential for future remedial action costs if the alternative remedial action in question were to fail; and

(G) the potential threat to human health and the environment associated with excavation, transportation, and redisposal, or containment.

The President shall select a remedial action that is protective of human health and the environment, that is cost effective, and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. If the President selects a remedial action not appropriate for a preference under this

subsection, the President shall publish an explanation as to why a remedial action involving such reductions was not selected.

(2) The President may select an alternative remedial action meeting the objectives of this subsection whether or not such action has been achieved in practice at any other facility or site that has similar characteristics. In making such a selection, the President may take into account the degree of support for such remedial action by parties interested in such site.

(c) Review

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each 5 years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section 9604 or 9606 of this title, the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

(d) Degree of cleanup

(1) Remedial actions selected under this section or otherwise required or agreed to by the President under this chapter shall attain a degree of cleanup of hazardous substances, pollutants, and contaminants released into the environment and of control of further release at a minimum which assures protection of human health and the environment. Such

remedial actions shall be relevant and appropriate under the circumstances presented by the release or threatened release of such substance, pollutant, or contaminant.

(2)(A) With respect to any hazardous substance, pollutant or contaminant that will remain onsite, if--

> **(i)** any standard, requirement, criteria, or limitation under any Federal environmental law, including, but not limited to, the Toxic Substances Control Act, the Safe Drinking Water Act, the Clean Air Act, the Clean Water Act, the Marine Protection, Research and Sanctuaries Act, or the Solid Waste Disposal Act; or
>
> **(ii)** any promulgated standard, requirement, criteria, or limitation under a State environmental or facility siting law that is more stringent than any Federal standard, requirement, criteria, or limitation, including each such State standard, requirement, criteria, or limitation contained in a program approved, authorized or delegated by the Administrator under a statute cited in subparagraph (A), and that has been identified to the President by the State in a timely manner,

is legally applicable to the hazardous substance or pollutant or contaminant concerned or is relevant and appropriate under the circumstances of the release or threatened release of such hazardous substance or pollutant or contaminant, the remedial action selected under section 9604 of this title or secured under section 9606 of this title shall require, at the completion of the remedial action, a level or standard of control for such hazardous substance or pollutant or contaminant which at least attains such legally applicable or relevant and appropriate standard, requirement, criteria, or limitation. Such remedial action shall require a level or standard of control which at least attains Maximum

Contaminant Level Goals established under the Safe Drinking Water Act and water quality criteria established under section 304 or 303 of the Clean Water Act, where such goals or criteria are relevant and appropriate under the circumstances of the release or threatened release.

(B)(i) In determining whether or not any water quality criteria under the Clean Water Act is relevant and appropriate under the circumstances of the release or threatened release, the President shall consider the designated or potential use of the surface or groundwater, the environmental media affected, the purposes for which such criteria were developed, and the latest information available.

(ii) For the purposes of this section, a process for establishing alternate concentration limits to those otherwise applicable for hazardous constituents in groundwater under subparagraph (A) may not be used to establish applicable standards under this paragraph if the process assumes a point of human exposure beyond the boundary of the facility, as defined at the conclusion of the remedial investigation and feasibility study, except where--

(I) there are known and projected points of entry of such groundwater into surface water; and

(II) on the basis of measurements or projections, there is or will be no statistically significant increase of such constituents from such groundwater in such surface water at the point of entry or at any point where there is reason to believe accumulation of constituents may occur downstream; and

(III) the remedial action includes enforceable measures that will preclude human exposure to the contaminated groundwater at any point between the facility boundary

and all known and projected points of entry of such groundwater into surface water

then the assumed point of human exposure may be at such known and projected points of entry.

(C)(i) Clause (ii) of this subparagraph shall be applicable only in cases where, due to the President's selection, in compliance with subsection (b)(1) of this section, of a proposed remedial action which does not permanently and significantly reduce the volume, toxicity, or mobility of hazardous substances, pollutants, or contaminants, the proposed disposition of waste generated by or associated with the remedial action selected by the President is land disposal in a State referred to in clause (ii).

(ii) Except as provided in clauses (iii) and (iv), a State standard, requirement, criteria, or limitation (including any State siting standard or requirement) which could effectively result in the statewide prohibition of land disposal of hazardous substances, pollutants, or contaminants shall not apply.

(iii) Any State standard, requirement, criteria, or limitation referred to in clause (ii) shall apply where each of the following conditions is met:

(I) The State standard, requirement, criteria, or limitation is of general applicability and was adopted by formal means.

(II) The State standard, requirement, criteria, or limitation was adopted on the basis of hydrologic, geologic, or other relevant considerations and was not adopted for the purpose of precluding onsite remedial actions or other land disposal for reasons unrelated to protection of human health and the environment.

(III) The State arranges for, and assures payment of the incremental costs of utilizing, a facility for disposition of the hazardous substances, pollutants, or contaminants concerned.

(iv) Where the remedial action selected by the President does not conform to a State standard and the State has initiated a law suit against the Environmental Protection Agency prior to May 1, 1986, to seek to have the remedial action conform to such standard, the President shall conform the remedial action to the State standard. The State shall assure the availability of an offsite facility for such remedial action.

(3) In the case of any removal or remedial action involving the transfer of any hazardous substance or pollutant or contaminant offsite, such hazardous substance or pollutant or contaminant shall only be transferred to a facility which is operating in compliance with section 3004 and 3005 of the Solid Waste Disposal Act (or, where applicable, in compliance with the Toxic Substances Control Act or other applicable Federal law) and all applicable State requirements. Such substance or pollutant or contaminant may be transferred to a land disposal facility only if the President determines that both of the following requirements are met:

(A) The unit to which the hazardous substance or pollutant or contaminant is transferred is not releasing any hazardous waste, or constituent thereof, into the groundwater or surface water or soil.

(B) All such releases from other units at the facility are being controlled by a corrective action program approved by the Administrator under subtitle C of the Solid Waste Disposal Act.

The President shall notify the owner or operator of such facility of determinations under this paragraph.

(4) The President may select a remedial action meeting the requirements of paragraph (1) that does not attain a level or standard of control at least equivalent to a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation as required by paragraph (2) (including subparagraph (B) thereof), if the President finds that--

(A) the remedial action selected is only part of a total remedial action that will attain such level or standard of control when completed;

(B) compliance with such requirement at that facility will result in greater risk to human health and the environment than alternative options;

(C) compliance with such requirements is technically impracticable from an engineering perspective;

(D) the remedial action selected will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, criteria, or limitation, through use of another method or approach;

(E) with respect to a State standard, requirement, criteria, or limitation, the State has not consistently applied (or demonstrated the intention to consistently apply) the standard, requirement, criteria, or limitation in similar circumstances at other remedial actions within the State; or

(F) in the case of a remedial action to be undertaken solely under section 9604 of this title using the Fund, selection of a remedial action that attains such level or standard of

control will not provide a balance between the need for protection of public health and welfare and the environment at the facility under consideration, and the availability of amounts from the Fund to respond to other sites which present or may present a threat to public health or welfare or the environment, taking into consideration the relative immediacy of such threats.

The President shall publish such findings, together with an explanation and appropriate documentation.

(e) Permits and enforcement

(1) No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this section.

(2) A State may enforce any Federal or State standard, requirement, criteria, or limitation to which the remedial action is required to conform under this chapter in the United States district court for the district in which the facility is located. Any consent decree shall require the parties to attempt expeditiously to resolve disagreements concerning implementation of the remedial action informally with the appropriate Federal and State agencies. Where the parties agree, the consent decree may provide for administrative enforcement. Each consent decree shall also contain stipulated penalties for violations of the decree in an amount not to exceed $25,000 per day, which may be enforced by either the President or the State. Such stipulated penalties shall not be construed to impair or affect the authority of the court to order compliance with the specific terms of any such decree.

(f) State involvement

(1) The President shall promulgate regulations providing for substantial and meaningful involvement by each State in initiation, development, and selection of remedial actions to be undertaken in that State. The regulations, at a minimum, shall include each of the following:

(A) State involvement in decisions whether to perform a preliminary assessment and site inspection.

(B) Allocation of responsibility for hazard ranking system scoring.

(C) State concurrence in deleting sites from the National Priorities List.

(D) State participation in the long-term planning process for all remedial sites within the State.

(E) A reasonable opportunity for States to review and comment on each of the following:

(i) The remedial investigation and feasibility study and all data and technical documents leading to its issuance.

(ii) The planned remedial action identified in the remedial investigation and feasibility study.

(iii) The engineering design following selection of the final remedial action.

(iv) Other technical data and reports relating to implementation of the remedy.

(v) Any proposed finding or decision by the President to exercise the authority of subsection (d)(4) of this section.

(F) Notice to the State of negotiations with potentially responsible parties regarding the scope of any response action at a facility in the State and an opportunity to participate in such negotiations and, subject to paragraph (2), be a party to any settlement.

(G) Notice to the State and an opportunity to comment on the President's proposed plan for remedial action as well as on alternative plans under consideration. The President's proposed decision regarding the selection of remedial action shall be accompanied by a response to the comments submitted by the State, including an explanation regarding any decision under subsection (d)(4) of this section on compliance with promulgated State standards. A copy of such response shall also be provided to the State.

(H) Prompt notice and explanation of each proposed action to the State in which the facility is located.

Prior to the promulgation of such regulations, the President shall provide notice to the State of negotiations with potentially responsible parties regarding the scope of any response action at a facility in the State, and such State may participate in such negotiations and, subject to paragraph (2), any settlements.

(2)(A) This paragraph shall apply to remedial actions secured under section 9606 of this title. At least 30 days prior to the entering of any consent decree, if the President proposes to select a remedial action that does not attain a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation, under the authority of subsection (d)(4) of this section, the President shall provide an opportunity for the State to concur or not concur in such

selection. If the State concurs, the State may become a signatory to the consent decree.

(B) If the State does not concur in such selection, and the State desires to have the remedial action conform to such standard, requirement, criteria, or limitation, the State shall intervene in the action under section 9606 of this title before entry of the consent decree, to seek to have the remedial action so conform. Such intervention shall be a matter of right. The remedial action shall conform to such standard, requirement, criteria, or limitation if the State establishes, on the administrative record, that the finding of the President was not supported by substantial evidence. If the court determines that the remedial action shall conform to such standard, requirement, criteria, or limitation, the remedial action shall be so modified and the State may become a signatory to the decree. If the court determines that the remedial action need not conform to such standard, requirement, criteria, or limitation, and the State pays or assures the payment of the additional costs attributable to meeting such standard, requirement, criteria, or limitation, the remedial action shall be so modified and the State shall become a signatory to the decree.

(C) The President may conclude settlement negotiations with potentially responsible parties without State concurrence.

(3)(A) This paragraph shall apply to remedial actions at facilities owned or operated by a department, agency, or instrumentality of the United States. At least 30 days prior to the publication of the President's final remedial action plan, if the President proposes to select a remedial action that does not attain a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation, under the authority of subsection (d)(4) of this section, the President shall provide an opportunity for the State to concur

or not concur in such selection. If the State concurs, or does not act within 30 days, the remedial action may proceed.

(B) If the State does not concur in such selection as provided in subparagraph (A), and desires to have the remedial action conform to such standard, requirement, criteria, or limitation, the State may maintain an action as follows:

(i) If the President has notified the State of selection of such a remedial action, the State may bring an action within 30 days of such notification for the sole purpose of determining whether the finding of the President is supported by substantial evidence. Such action shall be brought in the United States district court for the district in which the facility is located.

(ii) If the State establishes, on the administrative record, that the President's finding is not supported by substantial evidence, the remedial action shall be modified to conform to such standard, requirement, criteria, or limitation.

(iii) If the State fails to establish that the President's finding was not supported by substantial evidence and if the State pays, within 60 days of judgment, the additional costs attributable to meeting such standard, requirement, criteria, or limitation, the remedial action shall be selected to meet such standard, requirement, criteria, or limitation. If the State fails to pay within 60 days, the remedial action selected by the President shall proceed through completion.

(C) Nothing in this section precludes, and the court shall not enjoin, the Federal agency from taking any remedial action unrelated to or not inconsistent with such standard, requirement, criteria, or limitation.

Code of Federal Regulations, Title 40: Protection of Environment

PART 300—NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN

Subpart E—Hazardous Substance Response

§ 300.430 Remedial investigation/feasibility study and selection of remedy.

(a) *General*—(1) *Introduction.* The purpose of the remedy selection process is to implement remedies that eliminate, reduce, or control risks to human health and the environment. Remedial actions are to be implemented as soon as site data and information make it possible to do so. Accordingly, EPA has established the following program goal, expectations, and program management principles to assist in the identification and implementation of appropriate remedial actions.

(i) *Program goal.* The national goal of the remedy selection process is to select remedies that are protective of human health and the environment, that maintain protection over time, and that minimize untreated waste.

(ii) *Program management principles.* EPA generally shall consider the following general principles of program management during the remedial process:
(A) Sites should generally be remediated in operable units when early actions are necessary or appropriate to achieve significant risk reduction quickly, when phased analysis and response is necessary or appropriate given the size or complexity of the site, or to expedite the completion of total site cleanup.

(B) Operable units, including interim action operable units, should not be inconsistent with nor preclude implementation of the expected final remedy.
(C) Site-specific data needs, the evaluation of alternatives, and the documentation of the selected remedy should reflect the scope and complexity of the site problems being addressed.

(iii) *Expectations.* EPA generally shall consider the following expectations in developing appropriate remedial alternatives:
(A) EPA expects to use treatment to address the principal threats posed by a site, wherever practicable. Principal threats for which treatment is most likely to be appropriate include liquids, areas contaminated with high concentrations of toxic compounds, and highly mobile materials.
(B) EPA expects to use engineering controls, such as containment, for waste that poses a relatively low long-term threat or where treatment is impracticable.
(C) EPA expects to use a combination of methods, as appropriate, to achieve protection of human health and the environment. In appropriate site situations, treatment of the principal threats posed by a site, with priority placed on treating waste that is liquid, highly toxic or highly mobile, will be combined with engineering controls (such as containment) and institutional controls, as appropriate, for treatment residuals and untreated waste.
(D) EPA expects to use institutional controls such as water use and deed restrictions to supplement engineering controls as appropriate for short- and long-term management to prevent or limit exposure to hazardous substances, pollutants, or contaminants. Institutional controls may be used during the conduct of the remedial investigation/feasibility study (RI/FS) and implementation of the remedial action and, where necessary, as a component of the completed remedy. The use of institutional controls shall

not substitute for active response measures (*e.g.*, treatment and/or containment of source material, restoration of ground waters to their beneficial uses) as the sole remedy unless such active measures are determined not to be practicable, based on the balancing of trade-offs among alternatives that is conducted during the selection of remedy.

(E) EPA expects to consider using innovative technology when such technology offers the potential for comparable or superior treatment performance or implementability, fewer or lesser adverse impacts than other available approaches, or lower costs for similar levels of performance than demonstrated technologies.

(F) EPA expects to return usable ground waters to their beneficial uses wherever practicable, within a timeframe that is reasonable given the particular circumstances of the site. When restoration of ground water to beneficial uses is not practicable, EPA expects to prevent further migration of the plume, prevent exposure to the contaminated ground water, and evaluate further risk reduction.

(2) *Remedial investigation/feasibility study.* The purpose of the remedial investigation/feasibility study (RI/FS) is to assess site conditions and evaluate alternatives to the extent necessary to select a remedy. Developing and conducting an RI/FS generally includes the following activities: project scoping, data collection, risk assessment, treatability studies, and analysis of alternatives. The scope and timing of these activities should be tailored to the nature and complexity of the problem and the response alternatives being considered.

(b) *Scoping.* In implementing this section, the lead agency should consider the program goal, program management principles, and expectations contained in this rule. The investigative and analytical studies should be tailored to site circumstances so that the scope and detail of the analysis is appropriate to the complexity of site problems being

addressed. During scoping, the lead and support agencies shall confer to identify the optimal set and sequence of actions necessary to address site problems. Specifically, the lead agency shall:

(1) Assemble and evaluate existing data on the site, including the results of any removal actions, remedial preliminary assessment and site inspections, and the NPL listing process.

(2) Develop a conceptual understanding of the site based on evaluation of existing data described in paragraph (b)(1) of this section.

(3) Identify likely response scenarios and potentially applicable technologies and operable units that may address site problems.

(4) Undertake limited data collection efforts or studies where this information will assist in scoping the RI/FS or accelerate response actions, and begin to identify the need for treatability studies, as appropriate.

(5) Identify the type, quality, and quantity of the data that will be collected during the RI/FS to support decisions regarding remedial response activities.

(6) Prepare site-specific health and safety plans that shall specify, at a minimum, employee training and protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan that conforms with 29 CFR 1910.120 (l)(1) and (l)(2).

(7) If natural resources are or may be injured by the release, ensure that state and federal trustees of the affected natural resources have been notified in order that the trustees may initiate appropriate actions, including those identified in subpart G of this part. The lead agency shall seek to coordinate necessary assessments, evaluations, investigations, and planning with such state and federal trustees.

(8) Develop sampling and analysis plans that shall provide a process for obtaining data of sufficient quality and quantity

to satisfy data needs. Sampling and analysis plans shall be reviewed and approved by EPA. The sampling and analysis plans shall consist of two parts:
(i) The field sampling plan, which describes the number, type, and location of samples and the type of analyses; and
(ii) The quality assurance project plan, which describes policy, organization, and functional activities and the data quality objectives and measures necessary to achieve adequate data for use in selecting the appropriate remedy.
(9) Initiate the identification of potential federal and state ARARs and, as appropriate, other criteria, advisories, or guidance to be considered.

(c) *Community relations.* (1) The community relations requirements described in this section apply to all remedial activities undertaken pursuant to CERCLA section 104 and to section 106 or section 122 consent orders or decrees, or section 106 administrative orders.
(2) The lead agency shall provide for the conduct of the following community relations activities, to the extent practicable, prior to commencing field work for the remedial investigation:
(i) Conducting interviews with local officials, community residents, public interest groups, or other interested or affected parties, as appropriate, to solicit their concerns and information needs, and to learn how and when citizens would like to be involved in the Superfund process.
(ii) Preparing a formal community relations plan (CRP), based on the community interviews and other relevant information, specifying the community relations activities that the lead agency expects to undertake during the remedial response. The purpose of the CRP is to:
(A) Ensure the public appropriate opportunities for involvement in a wide variety of site-related decisions, including site analysis and characterization, alternatives analysis, and selection of remedy;

(B) Determine, based on community interviews, appropriate activities to ensure such public involvement, and
(C) Provide appropriate opportunities for the community to learn about the site.
(iii) Establishing at least one local information repository at or near the location of the response action. Each information repository should contain a copy of items made available to the public, including information that describes the technical assistance grants application process. The lead agency shall inform interested parties of the establishment of the information repository.
(iv) Informing the community of the availability of technical assistance grants.
(3) For PRP actions, the lead agency shall plan and implement the community relations program at a site. PRPs may participate in aspects of the community relations program at the discretion of and with oversight by the lead agency.
(4) The lead agency may conduct technical discussions involving PRPs and the public. These technical discussions may be held separately from, but contemporaneously with, the negotiations/settlement discussions.
(5) In addition, the following provisions specifically apply to enforcement actions:
(i) Lead agencies entering into an enforcement agreement with de minimis parties under CERCLA section 122(g) or cost recovery settlements under section 122(h) shall publish a notice of the proposed agreement in the Federal Register at least 30 days before the agreement becomes final, as required by section 122(i). The notice must identify the name of the facility and the parties to the proposed agreement and must allow an opportunity for comment and consideration of comments; and
(ii) Where the enforcement agreement is embodied in a consent decree, public notice and opportunity for public comment shall be provided in accordance with 28 CFR 50.7.

(d) *Remedial investigation.* (1) The purpose of the remedial investigation (RI) is to collect data necessary to adequately characterize the site for the purpose of developing and evaluating effective remedial alternatives. To characterize the site, the lead agency shall, as appropriate, conduct field investigations, including treatability studies, and conduct a baseline risk assessment. The RI provides information to assess the risks to human health and the environment and to support the development, evaluation, and selection of appropriate response alternatives. Site characterization may be conducted in one or more phases to focus sampling efforts and increase the efficiency of the investigation. Because estimates of actual or potential exposures and associated impacts on human and environmental receptors may be refined throughout the phases of the RI as new information is obtained, site characterization activities should be fully integrated with the development and evaluation of alternatives in the feasibility study. Bench- or pilot-scale treatability studies shall be conducted, when appropriate and practicable, to provide additional data for the detailed analysis and to support engineering design of remedial alternatives.

(2) The lead agency shall characterize the nature of and threat posed by the hazardous substances and hazardous materials and gather data necessary to assess the extent to which the release poses a threat to human health or the environment or to support the analysis and design of potential response actions by conducting, as appropriate, field investigations to assess the following factors:

(i) Physical characteristics of the site, including important surface features, soils, geology, hydrogeology, meteorology, and ecology;

(ii) Characteristics or classifications of air, surface water, and ground water;

(iii) The general characteristics of the waste, including quantities, state, concentration, toxicity, propensity to bioaccumulate, persistence, and mobility;
(iv) The extent to which the source can be adequately identified and characterized;
(v) Actual and potential exposure pathways through environmental media;
(vi) Actual and potential exposure routes, for example, inhalation and ingestion; and
(vii) Other factors, such as sensitive populations, that pertain to the characterization of the site or support the analysis of potential remedial action alternatives.
(3) The lead and support agency shall identify their respective potential ARARs related to the location of and contaminants at the site in a timely manner. The lead and support agencies may also, as appropriate, identify other pertinent advisories, criteria, or guidance in a timely manner (see § 300.400(g)(3)).
(4) Using the data developed under paragraphs (d)(1) and (2) of this section, the lead agency shall conduct a site-specific baseline risk assessment to characterize the current and potential threats to human health and the environment that may be posed by contaminants migrating to ground water or surface water, releasing to air, leaching through soil, remaining in the soil, and bioaccumulating in the food chain. The results of the baseline risk assessment will help establish acceptable exposure levels for use in developing remedial alternatives in the FS, as described in paragraph (e) of this section.

(e) *Feasibility study.* (1) The primary objective of the feasibility study (FS) is to ensure that appropriate remedial alternatives are developed and evaluated such that relevant information concerning the remedial action options can be presented to a decision-maker and an appropriate remedy selected. The lead agency may develop a feasibility study to

address a specific site problem or the entire site. The development and evaluation of alternatives shall reflect the scope and complexity of the remedial action under consideration and the site problems being addressed. Development of alternatives shall be fully integrated with the site characterization activities of the remedial investigation described in paragraph (d) of this section. The lead agency shall include an alternatives screening step, when needed, to select a reasonable number of alternatives for detailed analysis.

(2) Alternatives shall be developed that protect human health and the environment by recycling waste or by eliminating, reducing, and/or controlling risks posed through each pathway by a site. The number and type of alternatives to be analyzed shall be determined at each site, taking into account the scope, characteristics, and complexity of the site problem that is being addressed. In developing and, as appropriate, screening the alternatives, the lead agency shall:

(i) Establish remedial action objectives specifying contaminants and media of concern, potential exposure pathways, and remediation goals. Initially, preliminary remediation goals are developed based on readily available information, such as chemical-specific ARARs or other reliable information. Preliminary remediation goals should be modified, as necessary, as more information becomes available during the RI/FS. Final remediation goals will be determined when the remedy is selected. Remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following:

(A) Applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws, if available, and the following factors:

(*1*) For systemic toxicants, acceptable exposure levels shall represent concentration levels to which the human population, including sensitive subgroups, may be exposed

without adverse effect during a lifetime or part of a lifetime, incorporating an adequate margin of safety;

(*2*) For known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response. The 10^{-6} risk level shall be used as the point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways of exposure;

(*3*) Factors related to technical limitations such as detection/quantification limits for contaminants;

(*4*) Factors related to uncertainty; and

(*5*) Other pertinent information.

(B) Maximum contaminant level goals (MCLGs), established under the Safe Drinking Water Act, that are set at levels above zero, shall be attained by remedial actions for ground or surface waters that are current or potential sources of drinking water, where the MCLGs are relevant and appropriate under the circumstances of the release based on the factors in § 300.400(g)(2). If an MCLG is determined not to be relevant and appropriate, the corresponding maximum contaminant level (MCL) shall be attained where relevant and appropriate to the circumstances of the release.

(C) Where the MCLG for a contaminant has been set at a level of zero, the MCL promulgated for that contaminant under the Safe Drinking Water Act shall be attained by remedial actions for ground or surface waters that are current or potential sources of drinking water, where the MCL is relevant and appropriate under the circumstances of the release based on the factors in § 300.400(g)(2).

(D) In cases involving multiple contaminants or pathways where attainment of chemical-specific ARARs will result in cumulative risk in excess of 10^{-4}, criteria in paragraph (e)(2)(i)(A) of this section may also be considered when determining the cleanup level to be attained.

(E) Water quality criteria established under sections 303 or 304 of the Clean Water Act shall be attained where relevant and appropriate under the circumstances of the release.

(F) An alternate concentration limit (ACL) may be established in accordance with CERCLA section 121(d)(2)(B)(ii).

(G) Environmental evaluations shall be performed to assess threats to the environment, especially sensitive habitats and critical habitats of species protected under the Endangered Species Act.

(ii) Identify and evaluate potentially suitable technologies, including innovative technologies;

(iii) Assemble suitable technologies into alternative remedial actions.

(3) For source control actions, the lead agency shall develop, as appropriate:

(i) A range of alternatives in which treatment that reduces the toxicity, mobility, or volume of the hazardous substances, pollutants, or contaminants is a principal element. As appropriate, this range shall include an alternative that removes or destroys hazardous substances, pollutants, or contaminants to the maximum extent feasible, eliminating or minimizing, to the degree possible, the need for long-term management. The lead agency also shall develop, as appropriate, other alternatives which, at a minimum, treat the principal threats posed by the site but vary in the degree of treatment employed and the quantities

and characteristics of the treatment residuals and untreated waste that must be managed; and

(ii) One or more alternatives that involve little or no treatment, but provide protection of human health and the environment primarily by preventing or controlling exposure to hazardous substances, pollutants, or contaminants, through engineering controls, for example, containment, and, as necessary, institutional controls to protect human health and the environment and to assure continued effectiveness of the response action.

(4) For ground-water response actions, the lead agency shall develop a limited number of remedial alternatives that attain site-specific remediation levels within different restoration time periods utilizing one or more different technologies.

(5) The lead agency shall develop one or more innovative treatment technologies for further consideration if those technologies offer the potential for comparable or superior performance or implementability; fewer or lesser adverse impacts than other available approaches; or lower costs for similar levels of performance than demonstrated treatment technologies.

(6) The no-action alternative, which may be no further action if some removal or remedial action has already occurred at the site, shall be developed.

(7) As appropriate, and to the extent sufficient information is available, the short- and long-term aspects of the following three criteria shall be used to guide the development and screening of remedial alternatives:

(i) *Effectiveness.* This criterion focuses on the degree to which an alternative reduces toxicity, mobility, or volume through treatment, minimizes residual risks and affords long-term protection, complies with ARARs, minimizes short-term impacts, and how quickly it achieves protection. Alternatives providing significantly less effectiveness than other, more promising alternatives may be eliminated. Alternatives that do not provide adequate protection of

human health and the environment shall be eliminated from further consideration.

(ii) *Implementability.* This criterion focuses on the technical feasibility and availability of the technologies each alternative would employ and the administrative feasibility of implementing the alternative. Alternatives that are technically or administratively infeasible or that would require equipment, specialists, or facilities that are not available within a reasonable period of time may be eliminated from further consideration.

(iii) *Cost.* The costs of construction and any long-term costs to operate and maintain the alternatives shall be considered. Costs that are grossly excessive compared to the overall effectiveness of alternatives may be considered as one of several factors used to eliminate alternatives. Alternatives providing effectiveness and implementability similar to that of another alternative by employing a similar method of treatment or engineering control, but at greater cost, may be eliminated.

(8) The lead agency shall notify the support agency of the alternatives that will be evaluated in detail to facilitate the identification of ARARs and, as appropriate, pertinent advisories, criteria, or guidance to be considered.

(9) *Detailed analysis of alternatives.* (i) A detailed analysis shall be conducted on the limited number of alternatives that represent viable approaches to remedial action after evaluation in the screening stage. The lead and support agencies must identify their ARARs related to specific actions in a timely manner and no later than the early stages of the comparative analysis. The lead and support agencies may also, as appropriate, identify other pertinent advisories, criteria, or guidance in a timely manner.

(ii) The detailed analysis consists of an assessment of individual alternatives against each of nine evaluation criteria and a comparative analysis that focuses upon the

relative performance of each alternative against those criteria.

(iii) *Nine criteria for evaluation.* The analysis of alternatives under review shall reflect the scope and complexity of site problems and alternatives being evaluated and consider the relative significance of the factors within each criteria. The nine evaluation criteria are as follows:

(A) *Overall protection of human health and the environment.* Alternatives shall be assessed to determine whether they can adequately protect human health and the environment, in both the short- and long-term, from unacceptable risks posed by hazardous substances, pollutants, or contaminants present at the site by eliminating, reducing, or controlling exposures to levels established during development of remediation goals consistent with § 300.430(e)(2)(i). Overall protection of human health and the environment draws on the assessments of other evaluation criteria, especially long-term effectiveness and permanence, short-term effectiveness, and compliance with ARARs.

(B) *Compliance with ARARs.* The alternatives shall be assessed to determine whether they attain applicable or relevant and appropriate requirements under federal environmental laws and state environmental or facility siting laws or provide grounds for invoking one of the waivers under paragraph (f)(1)(ii)(C) of this section.

(C) *Long-term effectiveness and permanence.* Alternatives shall be assessed for the long-term effectiveness and permanence they afford, along with the degree of certainty that the alternative will prove successful. Factors that shall be considered, as appropriate, include the following:

(*1*) Magnitude of residual risk remaining from untreated waste or treatment residuals remaining at the conclusion of the remedial activities. The characteristics of the residuals should be considered to the degree that they remain

hazardous, taking into account their volume, toxicity, mobility, and propensity to bioaccumulate.

(*2*) Adequacy and reliability of controls such as containment systems and institutional controls that are necessary to manage treatment residuals and untreated waste. This factor addresses in particular the uncertainties associated with land disposal for providing long-term protection from residuals; the assessment of the potential need to replace technical components of the alternative, such as a cap, a slurry wall, or a treatment system; and the potential exposure pathways and risks posed should the remedial action need replacement.

(D) *Reduction of toxicity, mobility, or volume through treatment.* The degree to which alternatives employ recycling or treatment that reduces toxicity, mobility, or volume shall be assessed, including how treatment is used to address the principal threats posed by the site. Factors that shall be considered, as appropriate, include the following:

(*1*) The treatment or recycling processes the alternatives employ and materials they will treat;

(*2*) The amount of hazardous substances, pollutants, or contaminants that will be destroyed, treated, or recycled;

(*3*) The degree of expected reduction in toxicity, mobility, or volume of the waste due to treatment or recycling and the specification of which reduction(s) are occurring;

(*4*) The degree to which the treatment is irreversible;

(*5*) The type and quantity of residuals that will remain following treatment, considering the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents; and

(*6*) The degree to which treatment reduces the inherent hazards posed by principal threats at the site.

(E) *Short-term effectiveness.* The short-term impacts of alternatives shall be assessed considering the following:

(*1*) Short-term risks that might be posed to the community during implementation of an alternative;

(*2*) Potential impacts on workers during remedial action and the effectiveness and reliability of protective measures;
(*3*) Potential environmental impacts of the remedial action and the effectiveness and reliability of mitigative measures during implementation; and
(*4*) Time until protection is achieved.
(F) *Implementability.* The ease or difficulty of implementing the alternatives shall be assessed by considering the following types of factors as appropriate:
(*1*) Technical feasibility, including technical difficulties and unknowns associated with the construction and operation of a technology, the reliability of the technology, ease of undertaking additional remedial actions, and the ability to monitor the effectiveness of the remedy.
(*2*) Administrative feasibility, including activities needed to coordinate with other offices and agencies and the ability and time required to obtain any necessary approvals and permits from other agencies (for off-site actions);
(*3*) Availability of services and materials, including the availability of adequate off-site treatment, storage capacity, and disposal capacity and services; the availability of necessary equipment and specialists, and provisions to ensure any necessary additional resources; the availability of services and materials; and availability of prospective technologies.
(G) *Cost.* The types of costs that shall be assessed include the following:
(*1*) Capital costs, including both direct and indirect costs;
(*2*) Annual operation and maintenance costs; and
(*3*) Net present value of capital and O&M costs.
(H) *State acceptance.* Assessment of state concerns may not be completed until comments on the RI/FS are received but may be discussed, to the extent possible, in the proposed plan issued for public comment. The state concerns that shall be assessed include the following:

(*1*) The state's position and key concerns related to the preferred alternative and other alternatives; and
(*2*) State comments on ARARs or the proposed use of waivers.
(I) *Community acceptance.* This assessment includes determining which components of the alternatives interested persons in the community support, have reservations about, or oppose. This assessment may not be completed until comments on the proposed plan are received.

(f) *Selection of remedy*—(1) Remedies selected shall reflect the scope and purpose of the actions being undertaken and how the action relates to long-term, comprehensive response at the site.
(i) The criteria noted in paragraph (e)(9)(iii) of this section are used to select a remedy. These criteria are categorized into three groups.
(A) *Threshold criteria.* Overall protection of human health and the environment and compliance with ARARs (unless a specific ARAR is waived) are threshold requirements that each alternative must meet in order to be eligible for selection.
(B) *Primary balancing criteria.* The five primary balancing criteria are long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment; short-term effectiveness; implementability; and cost.
(C) *Modifying criteria.* State and community acceptance are modifying criteria that shall be considered in remedy selection.
(ii) The selection of a remedial action is a two-step process and shall proceed in accordance with § 300.515(e). First, the lead agency, in conjunction with the support agency, identifies a preferred alternative and presents it to the public in a proposed plan, for review and comment. Second, the lead agency shall review the public comments and consult with the state (or support agency) in order to determine if the

alternative remains the most appropriate remedial action for the site or site problem. The lead agency, as specified in § 300.515(e), makes the final remedy selection decision, which shall be documented in the ROD. Each remedial alternative selected as a Superfund remedy will employ the criteria as indicated in paragraph (f)(1)(i) of this section to make the following determination:

(A) Each remedial action selected shall be protective of human health and the environment.

(B) On-site remedial actions selected in a ROD must attain those ARARs that are identified at the time of ROD signature or provide grounds for invoking a waiver under § 300.430(f)(1)(ii)(C).

(*1*) Requirements that are promulgated or modified after ROD signature must be attained (or waived) only when determined to be applicable or relevant and appropriate and necessary to ensure that the remedy is protective of human health and the environment.

(*2*) Components of the remedy not described in the ROD must attain (or waive) requirements that are identified as applicable or relevant and appropriate at the time the amendment to the ROD or the explanation of significant difference describing the component is signed.

(C) An alternative that does not meet an ARAR under federal environmental or state environmental or facility siting laws may be selected under the following circumstances:

(*1*) The alternative is an interim measure and will become part of a total remedial action that will attain the applicable or relevant and appropriate federal or state requirement;

(*2*) Compliance with the requirement will result in greater risk to human health and the environment than other alternatives;

(*3*) Compliance with the requirement is technically impracticable from an engineering perspective;

(*4*) The alternative will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, or limitation through use of another method or approach;

(*5*) With respect to a state requirement, the state has not consistently applied, or demonstrated the intention to consistently apply, the promulgated requirement in similar circumstances at other remedial actions within the state; or

(*6*) For Fund-financed response actions only, an alternative that attains the ARAR will not provide a balance between the need for protection of human health and the environment at the site and the availability of Fund monies to respond to other sites that may present a threat to human health and the environment.

(D) Each remedial action selected shall be cost-effective, provided that it first satisfies the threshold criteria set forth in § 300.430(f)(1)(ii)(A) and (B). Cost-effectiveness is determined by evaluating the following three of the five balancing criteria noted in § 300.430(f)(1)(i)(B) to determine overall effectiveness: long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, and short-term effectiveness. Overall effectiveness is then compared to cost to ensure that the remedy is cost-effective. A remedy shall be cost-effective if its costs are proportional to its overall effectiveness.

(E) Each remedial action shall utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. This requirement shall be fulfilled by selecting the alternative that satisfies paragraph (f)(1)(ii)(A) and (B) of this section and provides the best balance of trade-offs among alternatives in terms of the five primary balancing criteria noted in paragraph (f)(1)(i)(B) of this section. The balancing shall emphasize long-term effectiveness and reduction of toxicity, mobility, or volume through treatment. The balancing shall also consider the preference for treatment as a principal

element and the bias against off-site land disposal of untreated waste. In making the determination under this paragraph, the modifying criteria of state acceptance and community acceptance described in paragraph (f)(1)(i)(C) of this section shall also be considered.

(2) *The proposed plan.* In the first step in the remedy selection process, the lead agency shall identify the alternative that best meets the requirements in § 300.430(f)(1), above, and shall present that alternative to the public in a proposed plan. The lead agency, in conjunction with the support agency and consistent with § 300.515(e), shall prepare a proposed plan that briefly describes the remedial alternatives analyzed by the lead agency, proposes a preferred remedial action alternative, and summarizes the information relied upon to select the preferred alternative. The selection of remedy process for an operable unit may be initiated at any time during the remedial action process. The purpose of the proposed plan is to supplement the RI/FS and provide the public with a reasonable opportunity to comment on the preferred alternative for remedial action, as well as alternative plans under consideration, and to participate in the selection of remedial action at a site. At a minimum, the proposed plan shall:

(i) Provide a brief summary description of the remedial alternatives evaluated in the detailed analysis established under paragraph (e)(9) of this section;

(ii) Identify and provide a discussion of the rationale that supports the preferred alternative;

(iii) Provide a summary of any formal comments received from the support agency; and

(iv) Provide a summary explanation of any proposed waiver identified under paragraph (f)(1)(ii)(C) of this section from an ARAR.

(3) *Community relations to support the selection of remedy.*
(i) The lead agency, after preparation of the proposed plan and review by the support agency, shall conduct the following activities:
(A) Publish a notice of availability and brief analysis of the proposed plan in a major local newspaper of general circulation;
(B) Make the proposed plan and supporting analysis and information available in the administrative record required under subpart I of this part;
(C) Provide a reasonable opportunity, not less than 30 calendar days, for submission of written and oral comments on the proposed plan and the supporting analysis and information located in the information repository, including the RI/FS. Upon timely request, the lead agency will extend the public comment period by a minimum of 30 additional days;
(D) Provide the opportunity for a public meeting to be held during the public comment period at or near the site at issue regarding the proposed plan and the supporting analysis and information;
(E) Keep a transcript of the public meeting held during the public comment period pursuant to CERCLA section 117(a) and make such transcript available to the public; and
(F) Prepare a written summary of significant comments, criticisms, and new relevant information submitted during the public comment period and the lead agency response to each issue. This responsiveness summary shall be made available with the record of decision.
(ii) After publication of the proposed plan and prior to adoption of the selected remedy in the record of decision, if new information is made available that significantly changes the basic features of the remedy with respect to scope, performance, or cost, such that the remedy significantly differs from the original proposal in the proposed plan and

the supporting analysis and information, the lead agency shall:

(A) Include a discussion in the record of decision of the significant changes and reasons for such changes, if the lead agency determines such changes could be reasonably anticipated by the public based on the alternatives and other information available in the proposed plan or the supporting analysis and information in the administrative record; or

(B) Seek additional public comment on a revised proposed plan, when the lead agency determines the change could not have been reasonably anticipated by the public based on the information available in the proposed plan or the supporting analysis and information in the administrative record. The lead agency shall, prior to adoption of the selected remedy in the ROD, issue a revised proposed plan, which shall include a discussion of the significant changes and the reasons for such changes, in accordance with the public participation requirements described in paragraph (f)(3)(i) of this section.

(4) *Final remedy selection.* (i) In the second and final step in the remedy selection process, the lead agency shall reassess its initial determination that the preferred alternative provides the best balance of trade-offs, now factoring in any new information or points of view expressed by the state (or support agency) and community during the public comment period. The lead agency shall consider state (or support agency) and community comments regarding the lead agency's evaluation of alternatives with respect to the other criteria. These comments may prompt the lead agency to modify aspects of the preferred alternative or decide that another alternative provides a more appropriate balance. The lead agency, as specified in § 300.515(e), shall make the final remedy selection decision and document that decision in the ROD.

(ii) If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site

above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after initiation of the selected remedial action.

(iii) The process for selection of a remedial action at a federal facility on the NPL, pursuant to CERCLA section 120, shall entail:

(A) Joint selection of remedial action by the head of the relevant department, agency, or instrumentality and EPA; or

(B) If mutual agreement on the remedy is not reached, selection of the remedy is made by EPA.

(5) *Documenting the decision.* (i) To support the selection of a remedial action, all facts, analyses of facts, and site-specific policy determinations considered in the course of carrying out activities in this section shall be documented, as appropriate, in a record of decision, in a level of detail appropriate to the site situation, for inclusion in the administrative record required under subpart I of this part. Documentation shall explain how the evaluation criteria in paragraph (e)(9)(iii) of this section were used to select the remedy.

(ii) The ROD shall describe the following statutory requirements as they relate to the scope and objectives of the action:

(A) How the selected remedy is protective of human health and the environment, explaining how the remedy eliminates, reduces, or controls exposures to human and environmental receptors;

(B) The federal and state requirements that are applicable or relevant and appropriate to the site that the remedy will attain;

(C) The applicable or relevant and appropriate requirements of other federal and state laws that the remedy will not meet, the waiver invoked, and the justification for invoking the waiver;

(D) How the remedy is cost-effective, i.e., explaining how the remedy provides overall effectiveness proportional to its costs;
(E) How the remedy utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and
(F) Whether the preference for remedies employing treatment which permanently and significantly reduces the toxicity, mobility, or volume of the hazardous substances, pollutants, or contaminants as a principal element is or is not satisfied by the selected remedy. If this preference is not satisfied, the record of decision must explain why a remedial action involving such reductions in toxicity, mobility, or volume was not selected.
(iii) The ROD also shall:
(A) Indicate, as appropriate, the remediation goals, discussed in paragraph (e)(2)(i) of this section, that the remedy is expected to achieve. Performance shall be measured at appropriate locations in the ground water, surface water, soils, air, and other affected environmental media. Measurement relating to the performance of the treatment processes and the engineering controls may also be identified, as appropriate;
(B) Discuss significant changes and the response to comments described in paragraph (f)(3)(i)(F) of this section;
(C) Describe whether hazardous substances, pollutants, or contaminants will remain at the site such that a review of the remedial action under paragraph (f)(4)(ii) of this section no less often than every five years shall be required; and
(D) When appropriate, provide a commitment for further analysis and selection of long-term response measures within an appropriate time-frame.

(6) *Community relations when the record of decision is signed.* After the ROD is signed, the lead agency shall:

(i) Publish a notice of the availability of the ROD in a major local newspaper of general circulation; and
(ii) Make the record of decision available for public inspection and copying at or near the facility at issue prior to the commencement of any remedial action.